UNITED STATES PATENT AND TRADEMARK OFFICE

_____

BEFORE THE PATENT TRIAL AND APPEAL BOARD

_____

Under Armour, Inc.
Petitioner,

v.

adidas AG,
Patent Owner

_____

PETITION FOR INTER PARTES REVIEW

OF

U.S. PATENT NO. 8,068,858

CHALLENGING CLAIMS 1, 3, 8, 11, 13, 18

Mail Stop Patent Board
Patent Trial and Appeal Board
U.S. Patent and Trademark Office
P. O. Box 1450
Alexandria, VA 22313-1450

TABLE OF CONTENTS

PETITIONER'S EXHIBIT LIST

February 5, 2015

UA-1001	U.S. Patent No. 8,068,858 to Werner et al.
UA-1002	R. Satava, et. al., *The Physiologic Cipher at Altitude: Telemedicine and Real-Time Monitoring of Climbers on Mount Everest*, Telemedicine Journal and e-Health, Vol. 6, No. 3 (2000) ("Satava")
UA-1003	WO 01/00281 A2 ("Wadell").
UA-1004	U.S. 2002/0198612 ("Smith")
UA-1005	Declaration of Dr. Joseph Paradiso
UA-1006	Redin, Maria S., *Marathon Man* (Jun. 15, 1998) (B.S. and M.S. thesis, Massachusetts Institute of Technology) (on file with MIT Libraries) ("*Marathon Man*")
UA-1007	Docket Report for Civil Action No. 1:14-cv-00130-GMS

I. MANDATORY NOTICES

A. Real Parties-in-Interest

The Petitioner Under Armour, Inc. ("Petitioner" or "Under Armour") and MapMyFitness, Inc., ("MapMyFitness") which is a wholly-owned subsidiary of Under Armour, are the real parties-in-interest.

B. Related Matters

As of the filing of this Petition, U.S. Patent No. 8,068,858 (the "858 Patent") is involved in one pending litigation naming Petitioner and MapMyFitness as defendants: *adidas AG, et. al. v. Under Armour, Inc. and MapMyFitness, Inc.*, Case No. 14-130-GMS (D. Del.). UA-1007.

C. Lead and Back-up Counsel and Service Information

Petitioner designates Brian Ferguson (Reg. No. 36,801), available at 1300 I Street NW, Suite 900, Washington, DC 20005 (T: 202-682-7516), as Lead Counsel and Adrian Percer (Reg. No. 46,986), available at 201 Redwood Shores Parkway, Redwood Shores, CA 94065 (T: 650-802-3124), as Backup Counsel. Please address all correspondence to lead and backup counsel. Petitioner consents to service by electronic email (brian.ferguson@weil.com; adrian.percer@weil.com).

II. GROUNDS FOR STANDING

Petitioner certifies that the 858 Patent is available for *inter partes* review and that Petitioner is not barred or estopped from requesting *inter partes* review challenging the patent claims on the grounds identified in this Petition. The

present petition is being filed within one year of Petitioner being served with the complaint in the co-pending litigation (Case No. 14-130-GMS). UA-1007.

III. IDENTIFICATION OF CHALLENGE AND RELIEF REQUESTED

Claims 1, 3, 8, 11, 13, and 18 of the 858 Patent ("Challenged Claims") are challenged in this Petition. Petitioner respectfully requests that the Board review the accompanying prior art and analysis, institute a trial for *inter partes* review of the Challenged Claims, and Petitioner respectfully requests that the Board cancel those claims as unpatentable.

A. Overview

The 858 Patent claims a method for remote monitoring of a user engaged in physical activity, in which the user is equipped with a device that transmits location and performance data over a wireless wide-area network to a remotely located computer. UA-1001 at 17:20-39. Petitioner submits that this method was in fact known and described in multiple prior art references that were not of record during the examination of the 858 Patent.

As the precision and commercial availability of Global Positioning System ("GPS") receivers increased (and the price decreased) in the 1990s, it became apparent that these GPS receivers could be combined with conventional radio and computer equipment to achieve real-time tracking of remotely located individuals—the core functionality claimed in the 858 patent. UA-1005 at ¶ 17.

As result, every element claimed in the 858 Patent had been conceived, reduced to practice, actually performed, and documented in printed publications well before January 16, 2004, the effective filing date of the 858 Patent.

As early as 1997, a team of MIT graduate students, researchers, and professors built and publicly tested a system that collected position and physiological data from marathon runners and transmitted it, in real-time, to servers for further display on the Internet. UA-1006.010-012; UA-1005 at ¶ 18. This "Marathon Man" project was memorialized and described in detail in a graduate thesis published on June 15, 1998. UA-1006.001.

A number of the participants in the Marathon Man project soon went on to an even more ambitious project—real-time remote tracking of climbers as they ascended Mount Everest. UA-1006.045-46. As will be discussed more fully below, the result of this collaboration was a system that, in the spring of 1999, successfully collected and transmitted position and performance data from climbers on Mount Everest to remote computers at Yale University in real time. UA-1002.001. This system was described in detail in an article titled "The Physiologic Cipher at Altitude: Telemedicine and Real-Time Monitoring of Climbers" ("Satava") that was published in a medical technology journal in 2000. UA-1002.

That same year, sports-tracking company Trakus, Inc. filed an international patent application—WO 0100281A2 ("Wadell")— disclosing a system for monitoring athletes, in which the athletes carried location-aware tracking devices that transmitted performance data to a central computing hub. UA-1003 at 3:1-5. The central computer could in turn disseminate the location and performance over the Internet for remote, real-time viewing. *Id.* at 7:4-6.

Finally, in April 2002, a published patent application, U.S. 2002/0198612 ("Smith"), disclosed a system for monitoring race competitors via GPS-enabled devices equipped with radio frequency (RF) transmitters. UA-1004 at ¶¶ 0035-36. Smith disclosed that the data was collected by a central computer and could be presented over the Internet, (*id.* at ¶ 0076), and provided an exemplary embodiment of a graphical user interface displaying both position and performance data. *Id.* at Fig. 4.

Petitioner accordingly requests that the Board institute *inter partes* review and cancel the Challenged Claims as invalid

B. The 858 Patent and Its Claims

The '858 patent issued from U.S. Pat. Application No. 12/963,307 ("the 307 Application"), filed on December 8, 2010. The 307 Application is a continuation of U.S. Pat. Application No. 11/932,154 ("the 154 Application"), filed on October 31, 2007 (and now U.S. Pat. No. 7,941,160), which is itself a continuation of U.S.

Pat. Application No. 11/857,862 ("the 862 Application"), filed on September 19, 2007 (and now U.S. Pat. No. 7,805,149). The 862 Application is a continuation of Pat. Application No. 10/759,289 ("the 289 Application), filed January 16, 2004, now U.S. Pat. No.7,292,867.

The 307 application that issued as the 858 Patent expressly references the patent applications cited above. It does not, however, claim priority to—or even mention—Provisional Application No. 60/440,519 ("the 519 Provisional"). The same is true of the 154 and 862 Applications. In the chain of continuations leading to the 858 Patent, only the 289 Application claimed priority to the 519 Provisional.

By statute, a priority claim to a provisional application is effective only if it "contains or is amended to contain a specific reference to the provisional application." 35 USC § 119 (e)(1). Accordingly, since no such "specific reference" to the 519 Provisional appears in the 307 Application, the earliest effective filing date for the 858 Patent that issued from the 307 Application is January 16, 2004. Even if the 307 Application had referenced the 519 Provisional, moreover, the result would be the same because prior applications in the chain of continuations failed to claim priority to the 519 Provisional. *See Medtronic CoreValve, LLC v. Edwards Lifesciences Corp.*, 741 F.3d 1359, 1363 (Fed. Cir. 2014) ("We agree with the district court that because intermediate U.S. Applications 6 and 8 failed to specifically reference the earlier filed applications in

the priority chain, the ′281 patent is not entitled to claim the priority date of International Application 2b under § 120.").

Independent claim 1 of the 858 Patent which is reproduced below, covers a method for remotely monitoring the position and performance of an individual engaged in a physical activity:

> 1. A method for execution by a server computer system of providing information about a first user engaged in a physical activity with a portable fitness device, the method comprising:
>
> receiving first user location data from the portable fitness device via a wide-area wireless network while the first user is engaged in the physical activity;
>
> receiving first user performance data from the portable fitness device via a wide-area wireless network while the first user is engaged in the physical activity;
>
> determining the first user's location with respect to a route path based on the received first user location data; and
>
> initiating a visual display on a remotely located second user's client computer system while the first user is engaged in the physical activity,
>
> wherein the visual display includes performance related content that is based on the first user performance data, and

wherein the visual display further includes an indication of the first user's location with respect to the route path.

UA-1001 at Claim 1.

Independent Claim 11 is directed to a computer program product that, when executed on a server computer system, performs the steps of claim 1. Claims 3 and 13, which depend on claim 1 and 10[1], respectively, require the same limitation that the performance information tracked includes "speed, pace, elapsed distance, elapsed time, distance to go, heart rate, or elevation data, or a combination thereof." Claims 8 and 18, which depend on claim 1 and 10, respectively, require the same limitation that the client computer system is a desktop computer.

IV. STATUTORY GROUNDS FOR THE CHALLENGES

This Petition requests *inter partes* review on the following grounds:

Ground 1	Anticipation of claims 1, 3, 8, 11, 13, and 18 under 35 U.S.C. § 102(b) based on Satava
Ground 2	Anticipation of claims 1, 3, 8, 11, 13, and 18 under 35 U.S.C. § 102(b) based on Wadell

[1] The dependency of claims 13 and 18 on claim 10 appears to be an error in the 858 Patent.

Ground 3	Anticipation of claims 1, 3, 8, 11, 13, and 18 under 35 U.S.C. § 102(a) and (b) based on Smith

Satava is a publication from the Telemedicine Journal and e-Health, Volume 6, Number 3, 2000, and therefore, is prior art under § 102(b). UA-1002.001.

Wadell is an international application that was published under the PCT on January 4, 2001 with an international filing date of June 29, 2000, and therefore, is prior art under § 102(b). UA-1003.001.

Smith is a U.S. patent application that was published on December 26, 2002 from an application filed on April 30, 2002 and, therefore, is prior art under § 102(a) or (b). UA-1004.001.

V. LEVEL OF ORDINARY SKILL IN THE ART

A person of ordinary skill in the art would have, through training or experience, an understanding of basic analog and digital circuits, microcontrollers, transmitters, receivers, signaling, sensing, and embedded software. In addition, a person of ordinary skill in the art would have had at least a working knowledge of wireless networking, computer programming, basic human-computer interaction devices, and basic movement, biometric and position sensors. Such a person would have at least a bachelor's degree in electrical engineering, computer engineering, or computer science, and three or more years of practical experience

with sensing, signaling, embedded systems and/or mobile systems, or the equivalent. UA-1005 at ¶ 11.

VI. CLAIM CONSTRUCTION

This Petition analyzes the claims consistent with the broadest reasonable interpretation in light of the specification. *See* 37 C.F.R. § 42.100(b).

A. *"wireless wide-area network"* (claims 1, 11)

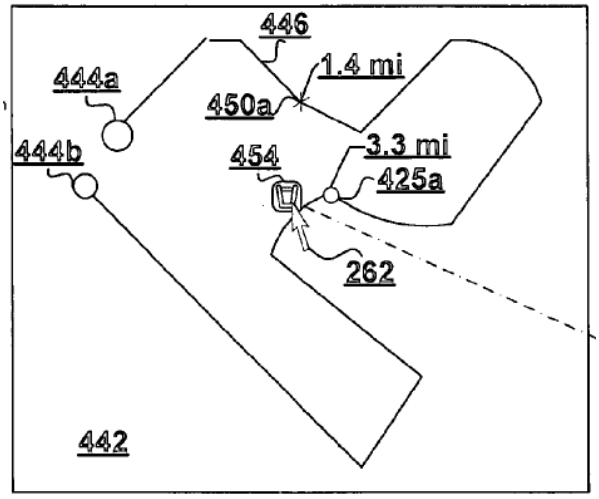
Petitioner contends that the broadest reasonable construction of "wireless wide-area network" is "a network that extends beyond the immediate vicinity of a user or room." There is no precise delineation in the art between a "wide area" network and a "local area" network. UA-1005 at ¶ 31. There is however, agreement regarding extreme ends of the spectrum—for example a cellular phone network is a classic example of a wide-area network, while a Wi-Fi network that is limited to the immediate vicinity of a user is an example of a local area network. *Id*. The 858 Patent does not provide a definition of "wide-area network" but does use a cellular network as an example. UA-1001 at 3:53-4:2. Accordingly, the broadest reasonable construction of "wireless wide-area network" excludes only those wireless networks that are clearly local area, such as those that are limited in range to the immediate vicinity of a user or room. *Id*.

B. *"with respect to a route path"* (claims 1, 11)

The Petitioner contends that the broadest reasonable interpretation of "with respect to a route path" is "in relation to a predetermined path."

This phrase appears in the limitation requiring "determining the first user's location with respect to a route path based on the received first user location data." UA-1001 at 17:30-31. The plain language of this limitation requires some comparison between the user's current location and a predetermined path (i.e., the route path). In other words, simply determining the user's location would be insufficient to meet this claim limitation, and requiring only that would give no meaning to the phrase "with respect to a route path."

This understanding of the phrase is reinforced by the disclosure in the 858 Patent. Apart from the "Summary of the Invention" and the claims, the only mention of a user's location with respect to a route path is with reference to Figure 5B. UA-1001 at 16:17-30. The 858 Patent states that Figure 5B, the relevant portion of which is reproduced below, displays "a route map 442 and a marker 450*a* showing the athlete's current location with respect to a route path 446." *Id*. at 16:21-23.



UA-1001 at Fig. 5B

This depiction plainly shows the "route path 446" to be a predetermined path. The athlete's location, 450*a*, is depicted such that it is not only clear to the viewer where the athlete currently is located on the route path, but it also clear where the athlete is *expected to travel*. Accordingly, the broadest reasonable interpretation of "with respect to a route path" is "in relation to a predetermined path." UA-1005 ¶ 32.

VII. IDENTIFICATION OF HOW THE CLAIMS ARE UNPATENTABLE

A. Ground 1: Satava

1. Claim 1

A method for execution by a server computer system of providing information about a first user engaged in a physical activity with a portable fitness device, the method comprising:

Satava discloses a method for transmitting position and performance data from climbers on Mount Everest, through a laptop computer base station, to remotely located observers at Yale University. UA-1002.001, .012. As depicted in

Figure 3 of Satava below, the base camp laptop receives the position and performance data and provides the information locally, as well as providing the information to remotely located computers via a wireless wide-area network. UA-1005 at ¶ 36. The Everest base camp laptop constitutes a "server computer system" because it was dedicated to providing "incremental ASCII datasets [that] were stored in a directory that was indexed to Laplink" for download to remote client computers at Yale. UA-1002.004; UA-1005 at ¶ 38.

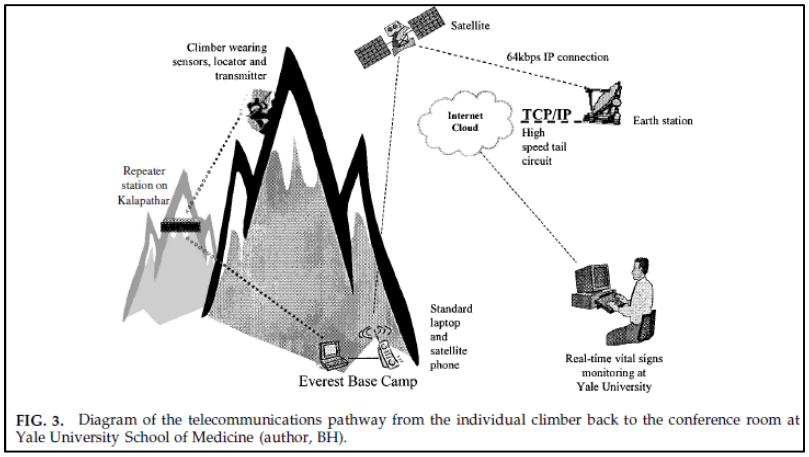


FIG. 3. Diagram of the telecommunications pathway from the individual climber back to the conference room at Yale University School of Medicine (author, BH).

UA-1002.005

Satava also discloses a portable fitness device that collects information about a user. Specifically, Satava discloses that each climber wore a wearable vital signs monitoring system ("VSM"), pictured below in Figure 2, that included a GPS receiver, a vital signs monitor, a central processing hub, and a "[w]earable, wireless communication system with radio frequency (RF) transmission." UA-1002.003.

FIG. 2. The vital-signs monitoring (VSM) system of Fitsense, Inc., demonstrating (**right to left**) the global positioning satellite (GPS) module, the central processing hub, and the radio frequency (RF) transmitter. (Courtesy of Dr. Tom Blackadar, Ph.D., FitSense Technologies, Inc., Wellesley, Massachusetts.)

UA-1002.003

Thus, to the extent the preamble of claim 1 of the 858 Patent constitutes a limitation, Satava discloses a method for execution by a server computer system for providing information about a first user engaged in a physical activity with a portable fitness device.

> **receiving first user location data from the portable fitness device via a wide-area wireless network while the first user is engaged in the physical activity"**
>
> **receiving first user performance data from the portable fitness device via a wide-area wireless network while the first user is engaged in the physical activity**

Satava discloses the receipt of both location and performance information from a wireless wide-area network, while the user is engaged in physical activity. In the system described in Satava, and pictured in Figure 3 below, each climber carried a monitoring device consisting of a GPS receiver, a set of sensors for measuring "vital and physical signs," and a "[w]earable, wireless communication system for with radio frequency (RF) transmission." UA-1002.003.

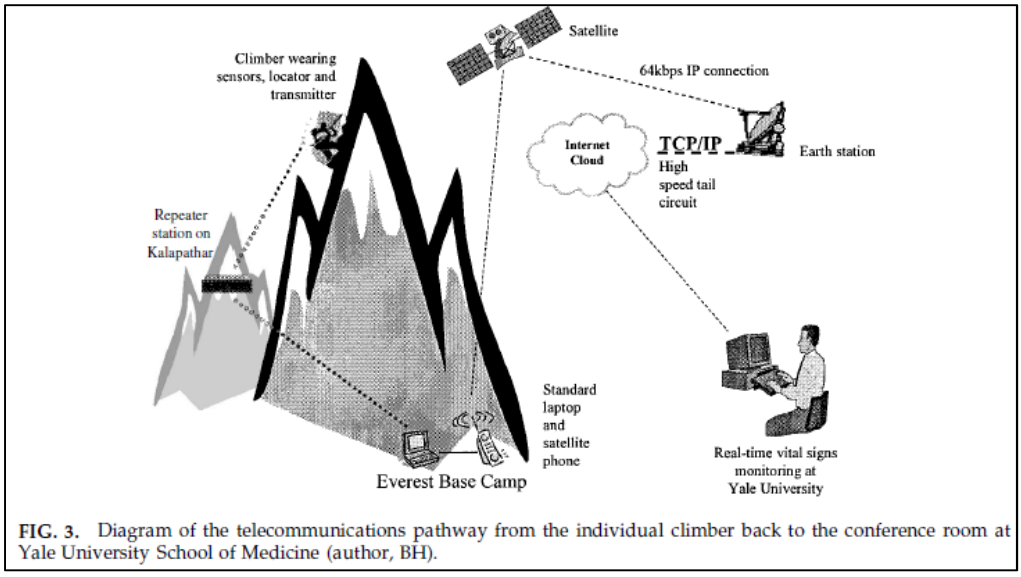


FIG. 3. Diagram of the telecommunications pathway from the individual climber back to the conference room at Yale University School of Medicine (author, BH).

UA-1002.005

Data collected from the sensors was wirelessly communicated to a data logging hub (part of the device carried by the user), where it was "time-stamped and geostamped with the GPS sensor" prior to further wireless transmission, via a radio transmitter (by way of a repeating station set up on mountain side), to a laptop computer located at the climber's base camp. *Id.* at .004. Data transmissions occurred every five minutes, and consisted of "time stamps (using Greenwich Mean Time), GPS location, heart rate, activity status, skin temperature, and core body temperature." *Id.* at .005. "Activity level," as used in Satava, referred to body "motions per minute," (*id.* at .008), and was measured using an accelerometer. *Id.* at .003. Satava thus discloses that position (e.g., "GPS location") and physiological performance data (e.g., "heart rate, activity status, skin temperature, and core body temperature") were transmitted over a wireless-

wide area network (the radio network that conveyed the data from the climbers to the base camp) to the base camp laptop. UA-1005 at ¶¶ 41-42.

Accordingly, Satava discloses a server receiving both user location and user performance data from a portable fitness device, over a wide-area wireless network, while the user is engaged in fitness activity. UA-1005 at ¶ 43.

determining the first user's location with respect to a route path based on the received first user location data

Satava discloses determining the user's location with respect to a route path based on the received location data. At the base camp laptop, raw location and performance data were "plotted on a graphical user interface, designed by Fitsense Technologies, Inc., which displayed intuitively the ciphered information (Fig. 4)." UA-1002.004. The same interface was displayed to remote viewers at client computers at Yale. *Id.* ("The physicians at Yale University downloaded the data at 5-minute increments. Because the data sent were standard ASCII, the encoded data were plotted on a graphical user interface, designed by Fitsense Technologies, Inc., which displayed intuitively the ciphered information (***Fig. 4***)."); UA-1005 at ¶ 44.

The interface, along with the caption that accompanied it in Satava, is depicted below:

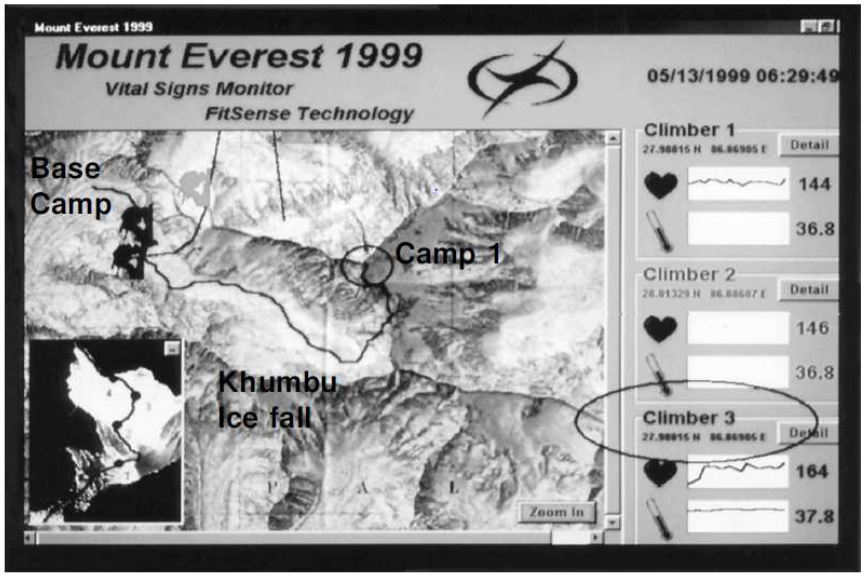


FIG. 4. The laptop computer screen, showing the intuitive graphical interface. On the left is the terrain map of Mount Everest with the overlay of the climbers' position, and on the right are the individual climber's vital signs. (Courtesy of Dr. Tom Blackadar, Ph.D., FitSense Technologies, Inc., Wellesley, Massachusetts.)

UA-1002.005

This interface not only displayed the "the trail and location of an individual climber"—i.e., the path traced by the route the climbers actually took—it also displayed, in the inset, a "reference graphic representation of the vertical ascent usually taken to the summit." UA-1002.007. In other words, Satava not only displayed the climbers' past positions, it also displayed the predetermined path that the climbers were expected to travel. UA-1005 at ¶¶ 44-46.

As discussed above, the broadest reasonable construction of "with respect to a route path" is "in relation to a predetermined path." Satava's display of both the climbers' current position *and* their expected future positions accordingly discloses determining user location with respect to a route path. UA-1005 at ¶ 46.

initiating a visual display on a remotely located second user's client computer system while the first user is engaged in the physical activity, wherein the visual display includes performance related content that is based on the first user performance data, and wherein the visual display further includes an indication of the first user's location with respect to the route path.

Satava discloses initiating a visual display on a remotely located second user's client computer system, wherein the display includes both performance data and an indication of the first user's location with respect to the route path. As illustrated in Figures 3-5 of Satava, the location and performance data collected by the climbers' portable VSM devices was formatted for display on a graphical user interface on the laptop at the Everest Base Camp. UA-1002.005-006. In addition, collected data was also displayed on a client computer system at Yale University, while the climbers were ascending Mount Everest. UA-1002.004 ("The physicians at Yale University downloaded the data at 5-minute increments. Because the data sent were standard ASCII, the encoded data were plotted on a graphical user interface, designed by Fitsense Technologies, Inc., which displayed intuitively the ciphered information.").

As Figure 5 (depicted below with the original caption) demonstrates, the data displayed to remote users included heart rate, core temperature, and skin temperature, as well as time and position:

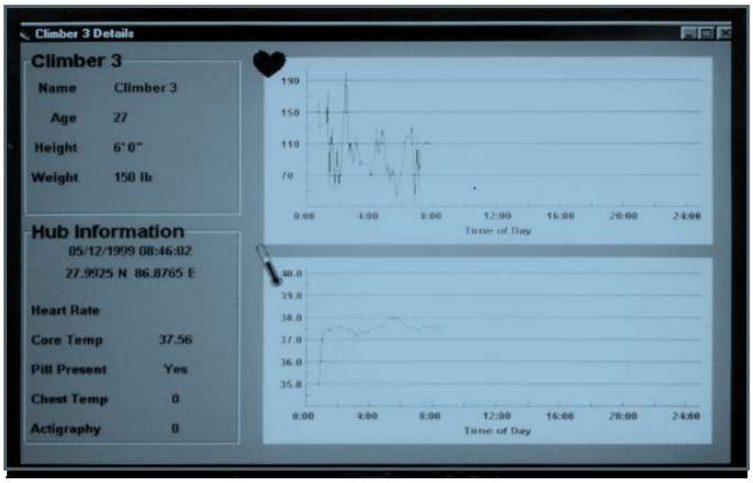


FIG. 5. Chronological graph of the vital signs of Climber 3. (Courtesy of Dr. Tom Blackadar, Ph.D., FitSense Technologies, Inc., Wellesley, Massachusetts.)

UA-1002.006

Figure 5, moreover, depicts a graphical display of climber physiological data, such as heart rate, over time—a clear disclosure of "performance related content that is based on the first user performance data." *Id*. The 858 Patent expressly recites heart rate as an example of real-time performance information. UA-1001 at 4:50-51.

In addition, the graphical user interface pictured in Figure 4 also included performance information such as heart rate and body temperature. *Id*. at .007 ("On the right side of the screen are the 'thumbnail' graphics of the continuous vital-signs summaries of the three climbers (two being active at the time of the screen capture) along with their latest updated values."). As discussed above (*supra* , p. 15), this graphical user interface additionally displayed both a climber's past position and a representation of the climber's prospective path for traversal.

Consequently, the display included an "indication of the user's location with respect to the route path." UA-1005 at ¶ 48.

Accordingly, Satava discloses initiating a visual display on a remotely located second user's client computer system while the first user is engaged in the physical activity, where the display includes performance content based on the first user performance data and an indication of the first user's location with respect to the route path. UA-1005 at ¶ 49.

2. Claims 3 and 8

[claim 3] The method of claim 1, wherein the first user performance data comprises speed, pace, elapsed distance, elapsed time, distance to go, heart rate, or elevation data, or a combination thereof.

Satava discloses that the performance data collected, transmitted, and displayed to a remote user included "time stamps (using Greenwich Mean Time), GPS location, ***heart rate***, activity status, skin temperature, and core body temperature. UA-1002.005. Accordingly, Satava discloses that the first user performance data constitutes one of the parameters enumerated in claim 3. UA-1005 at ¶ 50.

[claim 8] The method of claim 1, wherein the client computer system is a desktop computer.

Figure 3 of Satava, reproduced below, depicts the client computer as a desktop computer.

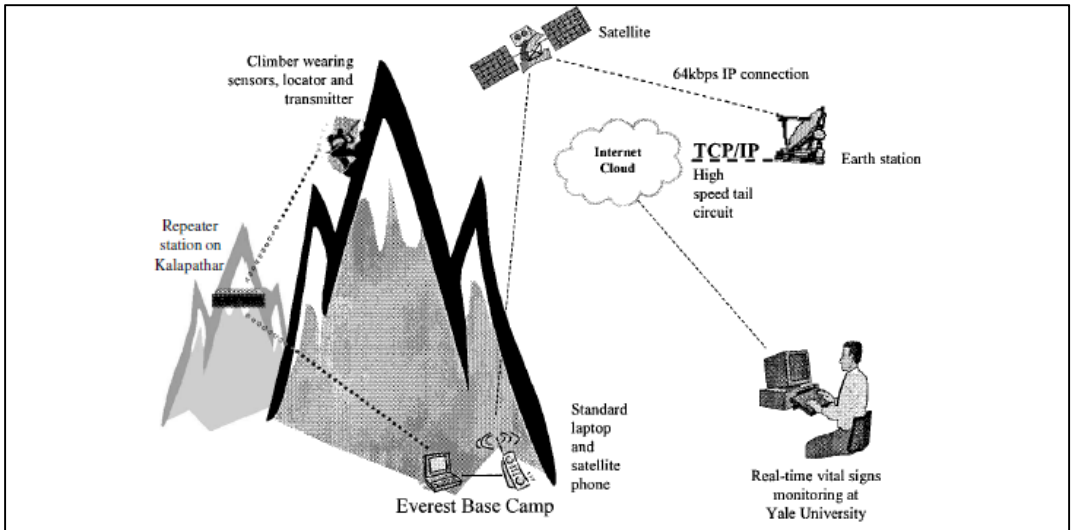


FIG. 3. Diagram of the telecommunications pathway from the individual climber back to the conference room at Yale University School of Medicine (author, BH).

UA-1002.005

In addition, Satava disclosed that the position and performance information was made available over the Internet. *Id.* One of ordinary skill in the art would have readily understood that data transmitted over the Internet was inherently capable of being displayed on any computer connected to the internet, including a desktop computer. UA-1005 at ¶ 52. Accordingly, Satava disclosed that the client computer was desktop computer.

3. Claim 11

Claim 11 of the 858 Patent contains the same functional limitations as claim 1, but repackages them as an apparatus claim directed to a computer program product operable to carry out each one of the steps in claim 1. UA-1005 at ¶ 53. As discussed above, Satava discloses a system, executed on a server, which performs each one of the method steps of claim 1. As was well known in the art,

any server computer that performs method steps, such as those of claim 1, does so only if directed by means of some "computer program product" that has "computer program logic" recorded on it, and that is executed by "one or more processors" through the use of "computer readable program code." *Id.*

In addition, Satava includes express disclosures of the program underlying the system. The laptop at Everest Base Camp, for example, contained "software [that] was programmed to collect aggregate ASCII (American Standard Code for Information Interchange) datasets from each of the monitoring devices at predetermined intervals." UA-1002.004. These "incremental ASCII datasets" were then "stored in a directory that was indexed" to a computer program called "Laplink," which facilitated their transfer from the base camp laptop (acting as a server) to the computers at Yale University. *Id.* The laptop computer required to present the climbers' position and performance data, moreover, by definition included program products and code for execution by processors that enabled the functionality of claim 1. UA-1005 at ¶ 53. For these reasons, Satava discloses each element of Claim 11.

4. Claims 13 and 18

Claims 13 and 18 each refer to the program product of claim 10. Claim 10, however, does not disclose a program product. Consequently, claims 13 and 18 do not provide reasonable notice of their claim scope to one of ordinary skill in the

art. To the extent the scope of these claims can by defined by reference to the program product of *claim 11*, Satava anticipates both of them. UA-1005 at ¶ 55. With respect to claim 13, Satava expressly discloses that the performance data collected includes heart rate data, as discussed above with respect to claim 3 (*supra*, p. 18). UA-1002.005. Regarding claim 18, Figure 3 of Satava depicts the client computer as desktop computer, as discussed above with respect to claim 8 (*supra*, p. 18). UA-1002.005; UA-1005 at ¶ 55. Accordingly, Satava discloses the limitations of both claims 13 and 18.

B. Ground 2: Wadell

1. Claim 1

A method for execution by a server computer system of providing information about a first user engaged in a physical activity with a portable fitness device, the method comprising:

Wadell relates generally to "systems and methods for monitoring player performance in sporting events and recreational activities." UA-1003 at 1:4-5. The systems disclosed are applicable to a wide variety of sports, including "running, skiing, swimming, baseball, hiking, sailing, rowing" and numerous other athletic activities. *Id.* at 3:10-11. In the systems disclosed in Wadell, athletes are equipped with a "player-mounted device," which can include "sensors, a transceiver, an antenna, a processor, and a display." *Id.* at 3:20-21. These player-mounted devices transmit data to a "central processor and data access or display

devices," (*id.* at 3:3-5), sometimes by way of field-positioned device. *Id.* at 5:21-22. The central processor can comprise "a PC-based computer, a workstation, or a server," (*id.* at 14:7-9), and can further disseminate the received data to an "Internet Web server computer." *Id.* at 7:4-5. Thus, to the extent the preamble of the 858 Patent is a limitation, Wadell discloses a server that can implement a method for providing information about a user engaged in a physical activity with a portable fitness device. UA-1005 at ¶ 58.

receiving first user location data from the portable fitness device via a wide-area wireless network while the first user is engaged in the physical activity

receiving first user performance data from the portable fitness device via a wide-area wireless network while the first user is engaged in the physical activity

Wadell discloses that a server receives location and performance information from a wireless wide-area network, while the user is engaged in physical activity. As noted earlier, Wadell discloses that each athlete's "player-mounted device" can include "sensors, a transceiver, an antenna, a processor, and a display." UA-1003 at 3:20-21. These player-mounted devices "can monitor a variety of performance parameters of the player to which it is mounted," including "heart rate, blood pressure, glucose level, speed, direction, acceleration, rotation, force of impact, elapsed time, split time, hang time in the air, ranking in a competition, position on a course, and the like." *Id.* at 4:4-6; *see also* 13:1-5. The player-mounted devices

are preferably equipped with GPS receivers that "generate precise position information of each player 216," which can be further transmitted to field-mounted devices. *Id.* at 13:18-23.

Once the data is collected, each player's "transceiver wirelessly transmits either the raw data, the performance parameters, or some combination of each to the field-positioned device by way of the player antenna." *Id.* at 4:12-15. The signal transmitted by the player-mounted device to the field-positioned devices can include "measured parameters such as x,y,z location, heart rate, blood pressure, ambient temperature, arm speed, or bat speed, for example." *Id*. at 13:1-5.

The field-positioned devices, in turn, can relay the collected and performance the data to a central processor. *Id.* at 14:3-4 ("In another embodiment, the central processor 203 receives data from the field-positioned devices 206 through an antenna 211."). In some embodiments, the field-position devices that relay the data are "tower transceivers" 214 as depicted in Figure 2A (shown below). *Id*. at 12:28-30.

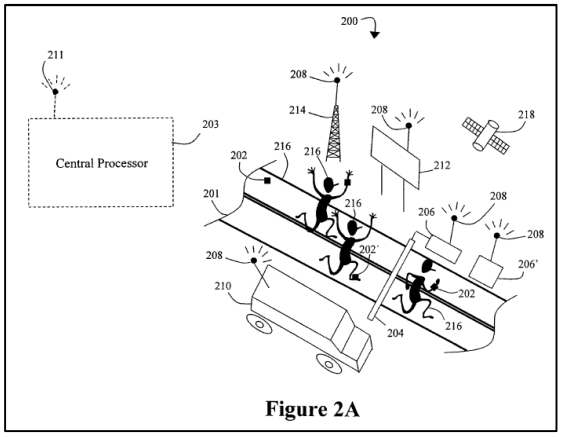


Figure 2A

Such tower transceivers perform essentially the same function as cellular towers (relaying radio signals over large distances), and would be understood by one of ordinary skill in the art to be part of a wireless wide-area network. UA-1005 at ¶ 63. The tower transceivers relay the signals received from the player-mounted devices to the central processor 203, which is equipped with an antenna 211. UA-1003 at 14:2-4 ("In another embodiment, the central processor 203 receives data from the field-positioned devices 206 through an antenna 211.).

Wadell further discloses that the central processor, which (as noted above) can constitute a server, is capable of connecting with other networks, including the internet. *Id.*, 27:12 ("The central processor 106 further includes an LAN or WAN (Internet) link 622."). The processor, moreover, "can display data in real-time." *Id.* at 31:2.

Wadell thus discloses a system in which player-mounted devices transmit position and performance information to field-mounted devices, which in turn optionally transmit it over a wireless-wide area network, to a server. Accordingly, Wadell discloses a server that receives both user location data and user performance data from a user over a wireless-wide area network, while the user is engaged in physical activity with a portable fitness device. UA-1005 at ¶ 64.

determining the first user's location with respect to a route path based on the received first user location data

Wadell discloses determining the user's location with respect to a route path.

Wadell discloses, for example, that "position on a course" is one of the performance parameters that the player-mounted device can collect and transmit. UA-1003 at 4:4-6. A calculation of "position on a course" necessarily involves a determination of athlete's location with respect to a predetermined course. UA-1005 at ¶ 63. Wadell also discloses that the central processor, i.e. a server, can make this determination, since the central processor in one embodiment "processes the data to determine the various performance parameters." UA-1003 at 10:16-18.

Relatedly, Wadell further discloses that the field-mounted devices are capable of transmitting additional performance data to the player-mounted devices, including "interval or split time, pace, distance traveled, **distance left in event**, calories burned, distance to next refreshment, and position in race, for example." *Id*. at 13:6-8. In order to calculate and subsequently transmit "distance left in the event," the system must necessarily have determined the athlete's position relative to a predetermined path. UA-1005 at ¶ 66.

Accordingly, Wadell discloses determining a user's location with respect to a route path based upon received position data.

> **initiating a visual display on a remotely located second user's client computer system while the first user is engaged in the physical activity, wherein the visual display includes performance related content that is based on the first user performance data, and wherein the visual display further includes an indication of the first user's location with respect to the route path.**

Wadell discloses initiating a visual display on a remotely located second

user's client computer system, wherein the display includes both performance data and an indication of the first user's location with respect to the route path. For example, Wadell discloses that "the performance monitoring system of the invention includes an Internet Web server computer, and the central processor includes an Internet connection for communicating with the Web server computer." UA-1003 at 7:4-6. The exchange of information over the Internet "may include providing performance parameters to the Web server computer and/or relaying messages between Internet users and the players by way of the field-positioned devices." *Id.* at 7:7-9. Wadell also discloses that "the data collected by the system from the players can be accessed by a variety of client devices for entertainment, training, or informational purposes," and that those devices can "connect to the central processor to obtain data and present the data, for example, in the form of an Internet Web page, a television graphic, an interactive television feed to the home, a video game, or the like." *Id.* at 7:14-23.

Consequently, one of ordinary skill in the art would understand Wadell to disclose that *any* of the collected data—which can include performance data such as heart rate and speed, and location data such as "position on a course"—can be visually displayed "in the form of an Internet webpage." UA-1005 at ¶ 68. This understanding is bolstered by other disclosures in Wadell, including that "position and performance information is transmitted to a central processor," where it can be

"adapted for viewing over the Internet." UA-1003 at 15:26-28. Elsewhere, Wadell further discloses that the "processor 608 provides a display of the positions of all the players in the event," which can prove a "snapshot, an animated recreation, or can display data in real-time." *Id.* at 30: 29-31:2. It also can provide, moreover, "a graphical output to the Internet or broadcast television." *Id.* at 31:2-3.

Accordingly, one of ordinary skill in the art would understand Wadell to disclose initiation of a visual display—including both performance and position information—on a remotely located user's computer, with the display also indicating the user's location with respect to a route path. UA-1004 ¶ 70.

2. Claims 3 and 8

[claim 3] The method of claim 1, wherein the first user performance data comprises speed, pace, elapsed distance, elapsed time, distance to go, heart rate, or elevation data, or a combination thereof.

Wadell discloses that the performance parameters monitored, transmitted, and displayed to a remote user can include "***heart rate***, blood pressure, glucose level, ***speed***, direction, acceleration, rotation, force of impact, ***elapsed time***, split time, hang time in the air, ranking in a competition, position on a course, and the like." *Id.* at 4:4-6. As a result, Wadell discloses that collected performance data can include multiple of the parameters listed in claim 3. UA-1005 at ¶ 72.

[claim 8] The method of claim 1, wherein the client computer system is a desktop computer.

Wadell discloses that the performance and position information received can be transmitted over the Internet. *Id.* at 7:7-9. Wadell further discloses that "the data collected by the system from the players can be accessed by a ***variety of client devices*** for entertainment, training, or informational purposes," and that those devices can "connect to the central processor to obtain data and present the data, for example, ***in the form of an Internet Web page***, a television graphic, an interactive television feed to the home, a video game, or the like." *Id.* at 7:14-23. As was well known in the art, information disseminated over the Internet is available to a wide variety of client devices connected to the Internet, including ubiquitous devices such as desktop computers. UA-1005 at ¶ 73. Accordingly, Wadell discloses that the client computer is a desktop computer.

3. Claim 11

Claim 11 of the 858 Patent contains the same functional limitations as claim 1, but repackages them as an apparatus claim directed to a computer program product operable to carry out each one of the steps in claim 1. UA-1005 at ¶ 75. As has been discussed above, Wadell discloses a server that performs each one of the method steps of claim 1. It is widely understood in the art that a server does not carry out any steps unless directed to by some "computer program product" that has "computer program logic" recorded on it, and further that is executed by

"one or more processors" through the use of "computer readable program code." UA-1004 at ¶ 75. Accordingly, because Wadell—as established above (*supra* , pp. 21-27)—discloses a server that carries out the steps of claim 1, Waddell necessarily also discloses the program product of Claim 11.

In addition, Wadell includes express disclosures regarding the software that makes the system possible: "the present invention also comprises display software included in the processor 608" that "provides a graphical output to the Internet or broadcast television." UA-1003 at 30:27-31:5. Wadell discloses that the "processor 308 also decodes and routes data" and "organizes upstream data words into proper packet formats for modulation and transmission." *Id.* at 17:21-24. Wadell further states that the "digital memory subsystem 310 includes an electrically erasable programmable read only memory (EEPROM)" that "may store non-volatile information such as instructions to be executed by processor 308, device, user, and/or event information." *Id.* at 17:29-18:4. This memory may further include "random access memory (RAM) for the temporary storage of raw data, monitored parameters and other volatile data" and may be "integrated into the processor 308." *Id.* Thus, the disclosure in Wadell that the player-tracking system includes a processor with a "programmable read only memory" that can execute instructions (e.g., software) for performing the steps of claim 1 is a disclosure of each element of Claim 11. UA-1005 at ¶ 75.

4. Claims 13 and 18

As noted earlier, claims 13 and 18 each refer to the program product of claim 10, which does not disclose a program product. Consequently, these claims do not provide one of ordinary skill on the art reasonable notice as to their scope. To the extent the scope of these claims can by defined by reference to the program product of *claim 11*, Wadell anticipates both of them. With respect to claim 13, Wadell expressly discloses that the performance data collected includes heart rate data, as discussed above with respect to claim 3 (*supra*, p. 28). UA-1003 at 4:4-6. Regarding claim 18, Wadell discloses the client computer as a desktop computer, as discussed above with respect to claim 8 (*supra*, p. 28). *Id.* at 7:14-23; UA-1005 at ¶ 73. Accordingly, Wadell discloses the limitations of both claim 13 and claim 18.

C. Ground 3: Smith

1. Claim 1

A method for execution by a server computer system of providing information about a first user engaged in a physical activity with a portable fitness device, the method comprising:

Smith discloses a "method of monitoring a plurality of competitors in a sporting event, comprises having each of said plurality of competitors carry a respective position locating device, arranging for the position locating devices to make location determinations at intervals and provide such determinations as

output positional location data for the respective competitors of said plurality of competitors and collecting output data for the plurality of competitors." UA-1004 at Abstract. Smith describes the method principally in the context of horse racing (which itself constitutes a "physical activity"), but states that the method "clearly can also be used for other sporting events, such as motor racing, rallying, team competitive sports, ***running*** etc." *Id*. at ¶ 0077.

Smith discloses a "real time system with radio transmission" including a "position locating device to be carried by the competitor" (*id*. at ¶ 0013), which is described as "unit 7" including a "GPS board 3" and "radio frequency transmitter 9." *Id*. at ¶ 0043. GPS data is transmitted to a "processing unit 8" via the radio frequency link. *Id*. at ¶ 0044. Finally, the processing unit can further cause the data to be presented graphically, the format of which may include "TV broadcast, WAP, HTML/Internet, email, paper hard copy, or any other available method of presentation." *Id*. at ¶¶ 0044, 0076.

Accordingly, to the extent the preamble of the 858 Patent is a limitation, Smith discloses a server that performs a method for providing information about a user, while the user is engaged in a physical activity with a portable fitness device. UA-1005 at ¶ 80.

receiving first user location data from the portable fitness device via a wide-area wireless network while the first user is engaged in the physical activity

receiving first user performance data from the portable fitness device via a wide-area wireless network while the first user is engaged in the physical activity

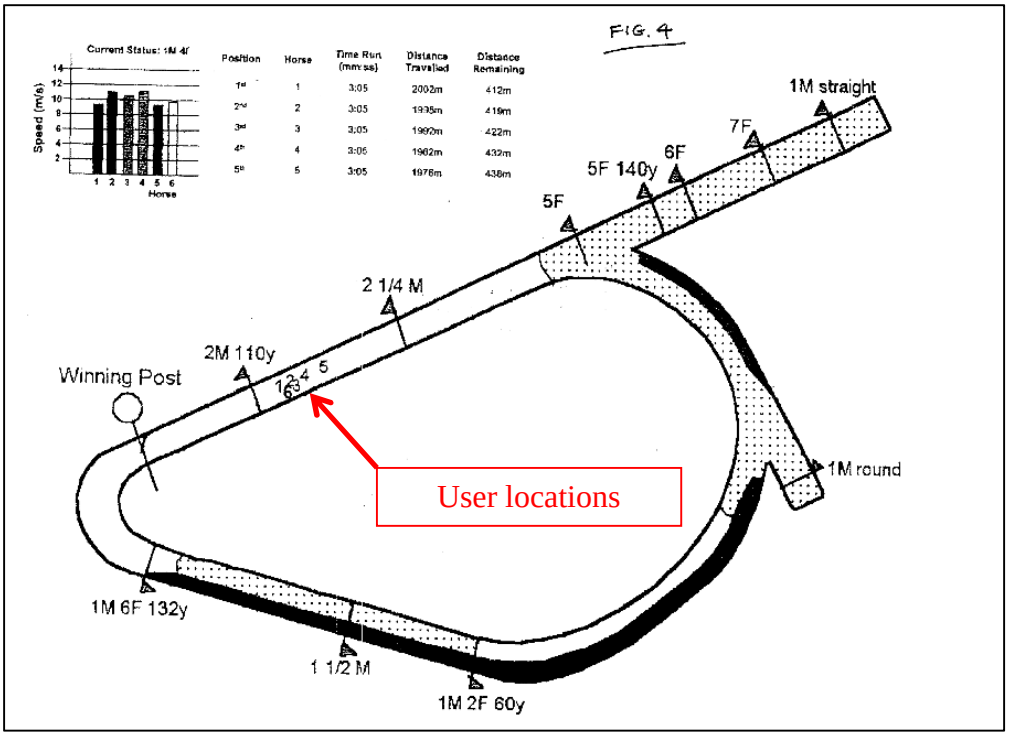
Smith discloses a "real time system with radio transmission" including a "position locating device to be carried by the competitor" (*id*. at ¶ 0013), which is described as "unit 7" including a "GPS board 3," "logger unit 5," and "radio frequency transmitter 9." UA-1004 at ¶ 0043. The "GPS unit 3 derives its position, and transmit this via RF unit 9 and antenna 10 to an RF reception interface 21, of the processor unit part 8, which has the capability to receive multiple data inputs." *Id*. at ¶ 0044. Thus, Smith discloses receiving first user performance data from a portable fitness device over a wireless wide-area network while the first user is engaged in a physical fitness activity. UA-1005 at ¶ ¶ 81-82.

Smith discloses that the data transmitted over the RF link includes both position and performance information. In the embodiment employing RF transmission, Smith discloses that speed and location are transmitted. *Id*. at ¶ 0030 ("Logger unit 5 can receive and transmit data via the RF unit 9 and antenna 10. Since, in this case, speed and/or location data are to be relayed substantially in real time, the primary purpose of the logger unit 5 is to interface the GPS unit with any subsequent transmission system, such as radio frequency transmission unit 9").

Smith also discloses that elapsed distance may also be calculated in the GPS receiver, and therefore, would be transmitted over the RF link to the processor unit 8 (instead of being calculated by the processor unit). *Id*. at ¶¶ 0048, 0052. Accordingly, Smith discloses receiving first user performance data from the portable fitness device via a wide-area wireless network while the first user is engaged in the physical activity. UA-1005 at ¶ ¶ 83-84.

determining the first user's location with respect to a route path based on the received first user location data

Smith discloses determining the user's location with respect to a route path. One of the functions of the central processor that Smith identifies is "calculating the horses geographical position within the racing boundary." UA-1004 at ¶ 0046. Elsewhere, Smith notes that "displaying the position of the horses on the racetrack will require graphical output." *Id.* at ¶ 0046. As Figure 4 (reproduced below) of Smith demonstrates, the determination of competitor location is with respect to a predetermined path (i.e., determining the firsts user's location with respect to a route path).



UA-1004 at Fig. 4 (annotated)

As stated in Smith, "FIG. 4 shows diagrammatically a GUI screen representation, suitable for broadcast media presentation, of Doncaster racecourse during a race," and represents one example of a "real time display that could be produced using the system and method of the invention." *Id.* at ¶ 0064. Figure 4 labels the horses in the race with numerals, and depicts their positions "racing down the home straight in a race of 1M 4f." *Id.* Figure 4 is a graphical output of the processor unit "calculating the horses geographical position within the racing boundary." *Id.* at ¶ 0046. Accordingly, Smith discloses determination of a user's location with respect to a predetermined route path. UA-1005 at ¶ ¶ 85-86.

initiating a visual display on a remotely located second user's client computer system while the first user is engaged in the physical activity, wherein the visual display includes performance related content that is based on the first user performance data, and wherein the visual display further includes an indication of the first user's location with respect to the route path.

As noted above, Figure 4 is "a GUI screen representation, suitable for broadcast media presentation" of a race in progress, and constitutes "one form of real time display that could be produced using the system and method of the invention." UA-1004 at ¶ 0064. Figure 4 displays the positions of users with respect to a defined course, and thus includes "an indication" of user location with respect to a route path. UA-1005 at ¶ 88. Figure 4 also includes tables and graphs that display performance-related content: "[a] graphic equaliser type display of each horses speed is presented and updated every second in the top left hand corner of the screen, and a table is also presented to textually represent the speed in race time." UA-1004 at ¶ 0065. Other performance data displayed in Figure 4 includes elapsed time, distance travelled, and distance remaining (*id*. at Fig. 4), and additional performance parameters, such as maximum speed, average speed, completion time (*id*. at ¶ 0066) are expressly contemplated for display.

One of ordinary skill in the art would understand that Smith's description of Figure 4 as a "GUI screen representation" discloses that it is intended to be viewed on a computer screen. UA-1005 at ¶ 90. Furthermore, Smith discloses that the visual depiction may be presented over the Internet: "[p]resentation formats may

include TV broadcast, WAP, HTML/Internet, email, paper hard copy, or any other available method of presentation." UA-1004 at ¶ 0076. As has been discussed, it is well-known among the general public and persons of ordinary skill in the art that transmission of information over the Internet results in its display on remotely located client computers. UA-1005 at ¶ 90.

Accordingly, Smith discloses the step of initiating a visual display on a remotely located client computer system while a first user is engaged in a physical activity, and where the display includes performance data and an indication of the user's location with respect to a route path.

2. Claims 3 and 8

[claim 3] The method of claim 1, wherein the first user performance data comprises speed, pace, elapsed distance, elapsed time, distance to go, heart rate, or elevation data, or a combination thereof.

Smith discloses that the performance information collected can include speed, pace, elapsed distance, elapsed time, distance to go, heart rate, elevation, or a combination thereof. For example, Smith expressly identifies "speed" as a parameter that can be transmitted over the wireless RF network to a central processor: "speed and/or location data are to be relayed substantially in real time." UA-1004 at ¶ 0030. Smith also states that "calculating the distance moved in the interval between GPS receiver outputs from said output"—i.e., elapsed distance—"may not be required if already calculated by the GPS receiver." *Id.* at ¶¶ 0048,

0052. Consequently, Smith discloses that the performance data transmitted over the wireless network to the server can include parameters such as speed and elapsed distance. UA-1005 at ¶ 90.

Smith further discloses that those two performance parameters—along with many others—are displayed on a remotely located client computer. As discussed above with respect to claim 1, Figure 4 of Smith includes speed data: "[a] graphic equaliser type display of each horses speed is presented and updated every second in the top left hand corner of the screen, and a table is also presented to textually represent the speed in race time." UA-1004 at ¶ 0065. Figure 4 also displays elapsed time, distance travelled, and distance remaining. *Id.* at Fig. 4. Since Figure 4 is an example of the graphical user interface that remote viewers would see while monitoring a first user's physical activity, Figure 4 establishes that the performance information displayed can include parameters such as speed and elapsed distance.

[claim 8] The method of claim 1, wherein the client computer system is a desktop computer.

Smith discloses that "[p]resentation formats may include TV broadcast, WAP, HTML/Internet, email, paper hard copy, or any other available method of presentation." UA-1004 at ¶ 0076. As is well known to the general public and persons of ordinary skill in the art, content made available over the Internet is accessible to any computer connected to it—including desktop computers. UA-

1005 at ¶ 93. Accordingly, Smith discloses that the client computer can be a desktop computer.

3. Claim 11

Claim 11 of the 858 Patent contains the same functional limitations as claim 1, but repackages them as an apparatus claim directed to a computer program product operable to carry out each one of the steps in claim 1. UA-1005 at ¶ 93. As demonstrated above (*supra*, pp. 31-36), Smith discloses a server that performs each one of the method steps of claim 1. It is widely understood in the art that a server does not carry out any steps unless directed to by some "computer program product" that has "computer program logic" recorded on it, and further that is executed by "one or more processors" through the use of "computer readable program code." UA-1005 at ¶ 25. Accordingly, because Smith—as established above—discloses a server that carries out the steps of claim 1, Smith necessarily also discloses the program product of Claim 11.

4. Claims 13 and 18

As noted earlier, Claims 13 and 18 each refer to the program product of claim 10, which does not disclose a program product. Consequently, these claims do not provide one of ordinary skill on the art reasonable notice as to their scope. To the extent the scope of these claims can by defined by reference to the program product of *claim 11*, Smith anticipates both of them. With respect to claim 13,

Smith expressly discloses that the performance data collected includes speed and elapsed distance, as discussed above with respect to claim 3 (*supra*, pp. 36-37). Regarding claim 18, Smith discloses the client computer as a desktop computer, as discussed above with respect to claim 8 (*supra*, p. 38).

VIII. CONCLUSION

The grounds identified in this Petition highlight new prior art that indicate a reasonable likelihood of success that the Challenged Claims are not patentable pursuant to the grounds presented in this Petition. Petitioner respectfully requests institution of an *inter partes* review on those grounds presented herein. The undersigned further authorizes payment for any additional fees that may be due in connection with this Petition to be charged to Deposit Account No. 506499.

Dated: February 5, 2015

Respectfully submitted,

/s/ Brian Ferguson

Brian E. Ferguson (Reg No. 36,801)
Weil Gotshal & Manges LLP
1300 I Street NW Suite 900
Washington, DC 20005
T: 202-682-7000
brian.ferguson@weil.com

Adrian Percer (Reg. No. 46,986)
Weil Gotshal & Manges LLP
201 Redwood Shores Pkwy
Redwood Shores, CA 94065
T: 650-802-3000
adrian.percer@weil.com

CERTIFICATE OF SERVICE

Pursuant to 37 C.F.R. § 42.105 and § 42.6(e), the undersigned certifies that on February 5, 2015, a complete and entire copy of this Petition for *Inter Partes* Review and all supporting exhibits were provided to:

Sterne Kessler Goldstein & Fox P.L.L.C.
1100 New York Ave N.W.
Washington, DC 20005
(BY FEDEX)

Matias Ferrario
Kilpatrick Townsend & Stockton LLP
1001 West Fourth Street
Winston-Salem, NC 27101-2400
mferrario@kilpatricktownsend.com
(BY EMAIL)

/s/ Timothy J. Andersen
Timothy J. Andersen
Case Manager
Weil Gotshal & Manges LLP
1300 I Street NW Suite 900
Washington, DC 20005
T: 202-682-7075
timothy.andersen@weil.com