# BEFORE THE PATENT TRIAL AND APPEAL BOARD 

FITBIT, INC., Petitioner, v.

BLACKBIRD TECH LLC, Patent Owner.

Case IPR2017-02012
Patent 6,434,212

## PATENT OWNER'S SUR-REPLY

Pursuant to authorization provided in the Board's October 15, 2018 e-mail to the parties, Blackbird Tech LLC d/b/a Blackbird Technologies ("Blackbird" or "Patent Owner") files this sur-reply in response to the Reply in support of the Petition for inter partes review filed by the named Petitioner Fitbit, Inc. ("Fitbit" or "Petitioner").

## I. THE BOARD WAS CORRECT TO DENY PETITIONERS' ANTICIPATION CHALLENGE TO CLAIMS 2 AND 5

## A. Amano Does Not Disclose "Programmed To Calculate A Distance Travelled By Multiplying A Number Of Steps Counted By The Step Counter By A Stride Length That Varies In Accordance With A Stride Rate"

Petitioner devotes a significant portion of its reply attempting to establish that Amano discloses the claimed "calculate a distance travelled by multiplying a number of steps counted by the step counter by a stride length that varies in accordance with a stride rate." But Petitioner's effort falls short. Petitioner again insists that Amano "calculates a distance by multiplying the user's pitch (i.e., the number of steps per unit time) by the user's stride length." Reply at 4 . Petitioner represents Amano's calculation using the following equation:

$$
\left(\frac{\text { number of steps }}{\text { unit time }}\right) x(\text { stride length })=\frac{\text { distance travelled }}{\text { unit time }}
$$

Even though Petitioner chose not the highlight the "unit time" aspects of the equation, it is readily apparent that Amano's calculation determines distance
travelled per unit of time. And distance travelled per unit of time is speed, not distance. Speed and distance are not the same thing. Amano's calculation does not determine distance any more than the following equation determines what " X " is:
$($ Pitch $) \mathrm{x}($ stride length $)=\mathrm{X} / \mathrm{B}$
A person presented with the above equation cannot determine what " X " is without multiplying "X/B" by "B." Similarly, a person presented with Amano's calculation cannot determine what distance is travelled without multiplying "distance travelled/unit time" by the "unit time."

Petitioner's expert confirmed the difference between speed and distance during her deposition:
Q. In your opinion, how would a person of ordinary skill in the art as described in your declaration express the speed of an individual walking?
A. Distance travelled in unit time.
Q. So would it be fair to say that speed can be expressed in distance traveled per unit time?
A. Yes.
Q. And in your opinion, what is the difference between speed and distance?
A. There is an equation that states the relationship. Distance is equal to speed multiplied by time.

Ex. 2003 at 38:10-23.

The Kato reference, on which Petitioner relies in a separate challenge (Ground 3), is also informative. Kato, like Amano, explicitly discloses that pitch is multiplied by stride length. Specifically, Kato makes it clear that pitch multiplied by stride length is speed, not distance, by disclosing that "the stride is multiplied by the pitch, to obtain a walking speed of the walker." Ex. 1004 at 4:50-51. Kato also appreciates the difference between speed and distance, recognizing that it is necessary to multiply "the walking speed by said unit of time after the walking speed is calculated to obtain the distance travelled by the walker in said unit of time." Id. at 4:62-68. These teachings by Kato help emphasize that, contrary to Petitioner's belief, speed and distance are two separate things. And that pitch multiplied by stride length is speed, not distance. Accordingly, Amano's calculation of pitch multiplied by stride length does not meet the claimed "calculate a distance travelled by multiplying a number of steps counted by a stride length that varies in accordance with a stride rate" and cannot anticipate the challenged claims.

Perhaps recognizing that Amano's alleged teaching of distance calculation is deficient, Petitioner argues for the first time that column 18 in Amano teaches calculating distance. Reply at 7-9. But neither Petitioner nor its expert previously relied on column 18 and should not be allowed to do so now.

Substantively, the disclosures in column 18 fail to remedy the previously identified deficiencies. Petitioner alleges that the following text in column 18 teaches the claimed distance calculation:

On the other hand, if an altitude difference is present, then in step Sa103, CPU 201 first determines the slope from the aforementioned altitude distance and the distance run during the 30 seconds.

Ex. 1003 at 18:40-44. First, a "distance run during the 30 seconds" is a speed calculation, not a distance calculation. Patent Owner's expert confirmed during his deposition that this language refers to speed, not distance:

## Q. On line 40 it says, On the other hand, if an altitude difference is present, then in step Sa103, CPU 201 first determines the slope from the aforementioned altitude distance and the distance run during the 30 seconds.

A. Yes. Again distance over time. That's the velocity. Distance run over 30 seconds, that's a velocity measurement.

Ex. 1021 at 165:2-11.
Second, even if the recited text discloses calculating a distance (it does not), there is no indication that that distance is calculated by multiplying a number of steps counted by a stride length, as required by the challenged claims. The distance run during the 30 seconds is determined by some undisclosed method.

Such a vague disclosure is inadequate to teach that distance is calculated by multiplying a number of steps counted by a stride length.

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