

UNITED STATES PATENT AND TRADEMARK OFFICE

BEFORE THE PATENT TRIAL AND APPEAL BOARD

GARMIN INTERNATIONAL, INC.
Petitioner

v.

BLACKBIRD TECH, LLC d/b/a BLACKBIRD TECHNOLOGIES
Patent Owner

IPR2017-01058
Patent 6,434,212

**PETITION FOR *INTER PARTES* REVIEW
OF U.S. PATENT NO. 6,434,212**

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I. INTRODUCTION

Petitioner Garmin International, Inc. (“Petitioner”) respectfully requests an *Inter Partes* Review (“IPR”) of claims 1-3 and 5-8 (collectively, the “Challenged Claims”) of U.S. Patent 6,434,212 (“the ’212 Patent”). The ’212 Patent claims priority to U.S. Patent Application 09/181,738 (“the Parent Application”), which was filed on October 28, 1998 and itself issued as U.S. Patent 6,175,608. The ’212 Patent broadly claims a step counter device for measuring the distance traveled by a user by multiplying a number of steps taken by the length of the user’s stride. *’212 Patent* (EX1001) at 1:9-16. The ’212 device’s purported point of novelty uses a variable stride length that is determined through a formula that calibrates the dependency of the user’s stride length upon the user’s stride rate. *Id.* The ’212 Patent faced just one rejection over a single prior art reference during prosecution, and the subject matter of the Challenged Claims were given a first action allowance without substantive prior art rejection, based on this purported point of novelty. *See* Sec. II.C, *infra*.

But, as demonstrated below, the Challenged Claims’ steps of (1) multiplying a number of counted steps by a stride length that varies with stride rate and (2) calibrating the stride length as a function of stride rate were both known and obvious prior to 1998. Petitioner submits the expert declaration of Dr. Ken Fyfe, an expert in vibration analysis and fitness monitoring technology, in support of this

petition. *See Fyfe Decl.* (EX1002). As explained by Dr. Fyfe, prior to October 1998, it was well known that stride length varied with stride rate and that stride length could be varied in pedometers to account for this dependency to more accurately calculate distance. *See id.* at ¶¶35-36.

II. SUMMARY OF THE '212 PATENT

A. Description of the alleged invention of the '212 patent

The '212 Patent relates generally to pedometers that estimate distance traveled based on multiplying steps taken by stride length. It describes “a pedometer having improved accuracy by calculating actual stride lengths of a user based on relative stride rates.” '212 Patent (EX1001), at Abstract. In particular, the disclosed embodiments include the calibration steps of determining a “base stride length” for a particular user by walking or running a predetermined distance, counting steps taken, and dividing the predetermined distance by the number of steps counted. *Id.* at 2:40-45, 3:56-64; 5:1-9. The number of strides counted may then be divided by the time required to run or walk the predetermined distance to determine the “base stride rate” at which the base stride length was determined. *Id.* at 2:40-45, 3:65-67, 5:1-9; *see also, generally* 5:10-6:9. The '212 Patent notes the well-known dependence of stride length on stride rate (i.e., the length of a person's stride will naturally change based on how fast they are walking or running), and the patent seeks to correct the base stride length to a calculated “actual” stride

length as a function of a measured “actual” stride rate. *Id.* at 2:33-52, 4:20-46. In doing so, the ’212 Patent seeks to arrive at a more accurate estimate of distance traveled, as compared to prior art “fixed stride length” devices that did not take into account the fact that stride length varies with stride rate or that required recalibration at the desired stride rate. *Id.* at 1:54-55, 1:63-65, 4:20-29. Further, the ’212 Patent discloses performing a plurality of calibrations for a plurality of stride lengths and stride rates using a plurality of sample runs/walks of a predetermined distance to generate a mathematical function that allows stride length to vary according to stride rate. 2:57-59, 4:62-6:12. Embodiments of the device taught by the ’212 Patent include a step counter, such as an inertia device, used to count steps, a strap, a transmitter, a receiver, and a heart rate monitor. *Id.* at 2:15-20, 3:12-30, Fig. 1.

B. Summary of the prosecution history of the ’608 patent

The Parent Application to which the ’212 Patent claims priority was filed on October 28, 1998. *’608 Patent File History* (EX1003) at 7. On January 28, 2000, the Examiner issued a Non-Final Rejection, rejecting all claims under 35 U.S.C. § 112 for many instances of lack of clear antecedent basis. *Id.* at 66. Additionally, many claims were rejected as anticipated under § 102 and/or rendered obvious under § 103 by U.S. Patent 5,891,042 to Sham et al. (“Sham”), teaching a pedometer including a step counter, transmitter, and heart rate monitor. *Id.* at 67.

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