Trials@uspto.gov
571-272-7822

Paper 7
Entered: June 27, 2018

UNITED STATES PATENT AND TRADEMARK OFFICE

BEFORE THE PATENT TRIAL AND APPEAL BOARD

APPLE INC.,
Petitioner,

v.

UNILOC LUXEMBOURG S.A.,
Patent Owner.

Case IPR2018-00389
Patent 8,712,723 B1

Before SALLY C. MEDLEY, JENNIFER S. BISK, and MIRIAM L. QUINN, *Administrative Patent Judges.*

QUINN, *Administrative Patent Judge.*

DECISION
Institution of *Inter Partes* Review
35 U.S.C. § 314(a)

I. INTRODUCTION

Apple Inc. ("Petitioner") filed a Petition requesting *inter partes* review of claims 1–3, 5–7, and 10–18 of U.S. Patent No. 8,712,723 B1 (Ex. 1001, "the '723 patent"). Paper 2 ("Pet."). Uniloc Luxembourg S.A. ("Patent Owner"), filed a Preliminary Response. Paper 6 ("Prelim. Resp.").

We have jurisdiction under 35 U.S.C. § 314. Upon considering the record developed thus far, for reasons discussed below, we institute *inter partes* review of claims 1–3, 5–7, and 10–18 of the '723 patent.

A. Related Matters

The parties indicate that the '723 patent is involved in *Uniloc USA, Inc. v. Apple, Inc.*, Case No. 2-17-cv-00522 (E.D. Tex.) and other proceedings. Pet. 2; Paper 3.

B. The '723 Patent

The '723 patent relates to monitoring and counting periodic human motions, such as steps. Ex. 1001, 1:12–14. The '723 patent states that inertial sensors (e.g., accelerometers) are used in step counting devices allowing an individual to track the number of daily steps. *Id.* at 1:18–29. One problem recognized in the '723 patent is the limitations of these step counting devices concerning the orientation of the device during use. *Id.* at 1:29–34. Further, motion noise often confuses these devices resulting in missed steps or counting false steps, with a particular problem identified of inaccurate step measurements for slow walkers. *Id.* at 1:35–43.

The ’723 patent provides for accurate counting of steps without regard for the orientation of the step counting device, even if that orientation changes during operation. *Id.* at 2:33–38. In particular, the ’723 patent describes assigning a dominant axis after determining an orientation of the inertial sensor, where the orientation of the inertial sensor is continuously determined. *Id.* at 2:15–19. In one embodiment, the ’723 patent method determines rolling averages of the accelerations of each axis monitored by the inertial sensor in the device. *Id.* at 6:15–21. The largest absolute rolling average indicates the axis most influenced by gravity, which may change over time, as the device’s orientation changes because of rotation. *Id.* at 6:20–25.

With regard to the embodiment shown in Figure 8, reproduced below, the ’723 patent describes the method for measuring the acceleration along the assigned dominant axis to detect, and count, steps. *See id.* at 12:30–35.

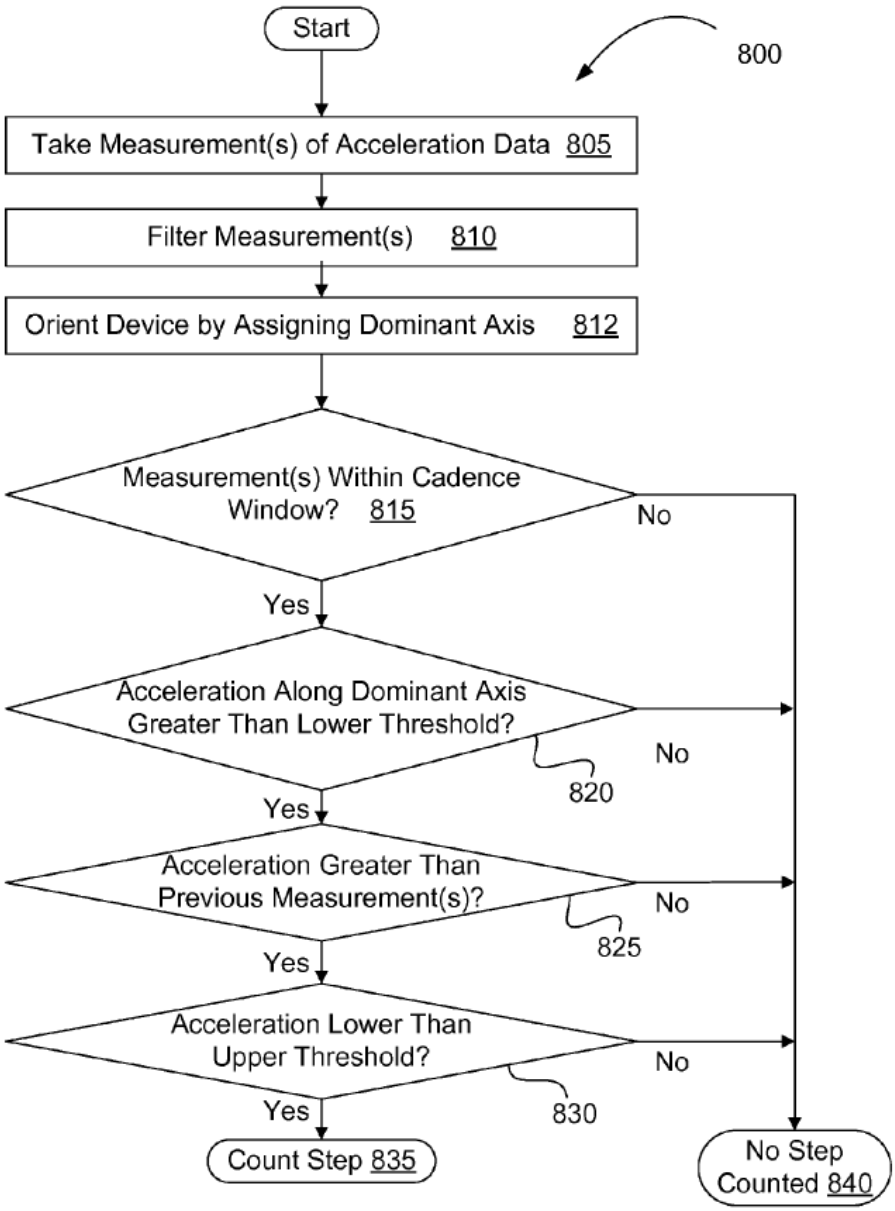

Figure 8

Figure 8 illustrates a diagram for a method of recognizing a step. After measurements of acceleration data (step 805) and filtering those measurements (step 810), the method evaluates the orientation of the device and assigns a dominant axis (step 812). A processing logic determines

whether a measurement is within a cadence window (step 815). The cadence window is the allowable time window for steps to occur. *Id.* at 3:65–66. In one embodiment, the cadence window is determined based on the actual stepping period or actual motion cycle, but default limits or other determiners may be used to set the cadence window. *Id.* at 4:7–27. After each step is counted, the minimum and/or maximum of the cadence window, or window length, may be adjusted based on actual cadence changes. *Id.* Therefore, the cadence window is dynamic so that it continuously updates. *Id.* at 4:31–33.

If the measurement of acceleration along the dominant axis is within the cadence window, and is within the range of acceleration thresholds (steps 820, 830), the motion is determined to be a step and is counted (step 835). Otherwise, the step is not counted (step 840) and the method continues to evaluate subsequent measurements.

C. Illustrative Claim

Of the challenged claims, claims 1, 5, 10, and 14 are independent. Each of claims 2, 3, 6, 7, 11–13, and 15–18 depends directly or indirectly from one of the challenged independent claims.

Claim 1 is illustrative:

> 1. A method for monitoring human activity using an inertial sensor, comprising:
>
> assigning a dominant axis with respect to gravity based on an orientation of the inertial sensor;
>
> detecting a change in the orientation of the inertial sensor and updating the dominant axis based on the change; and

DOCKET ALARM

Explore Litigation Insights

Docket Alarm provides insights to develop a more informed litigation strategy and the peace of mind of knowing you're on top of things.

Real-Time Litigation Alerts

Keep your litigation team up-to-date with **real-time alerts** and advanced team management tools built for the enterprise, all while greatly reducing PACER spend.

Our comprehensive service means we can handle Federal, State, and Administrative courts across the country.

Advanced Docket Research

With over 230 million records, Docket Alarm's cloud-native docket research platform finds what other services can't. Coverage includes Federal, State, plus PTAB, TTAB, ITC and NLRB decisions, all in one place.

Identify arguments that have been successful in the past with full text, pinpoint searching. Link to case law cited within any court document via Fastcase.

Analytics At Your Fingertips

Learn what happened the last time a particular judge, opposing counsel or company faced cases similar to yours.

Advanced out-of-the-box PTAB and TTAB analytics are always at your fingertips.

API

Docket Alarm offers a powerful API (application programming interface) to developers that want to integrate case filings into their apps.

LAW FIRMS
Build custom dashboards for your attorneys and clients with live data direct from the court.

Automate many repetitive legal tasks like conflict checks, document management, and marketing.

FINANCIAL INSTITUTIONS
Litigation and bankruptcy checks for companies and debtors.

E-DISCOVERY AND LEGAL VENDORS
Sync your system to PACER to automate legal marketing.