IPR2021-00453

Apple Inc. v. Omni MedSci, Inc.

Petitioner Apple's Demonstrative Exhibit

Hearing Date: May 5, 2022

Grounds

Claims Challenged	References
1, 7, 15, 17	Lisogurski, Carlson
1-4, 7-12, 15-22	Lisogurski, Carlson, Tran
5, 13	Lisogurski, Carlson, Tran, Isaacson
6, 14, 23	Lisogurski, Carlson, Tran, Isaacson, Valencell-093

Reference		Date	Exhibit
Lisogurski	U.S. 9,241,676	May 31, 2012	1011
Carlson	U.S. 2005/0049468	Mar. 3, 2005	1009
Tran	U.S. 8,108,036	May 24, 2006	1064
Isaacson	U.S. 8,725,226	Nov. 13, 2009	1063
Valencell-093	U.S. 2012/0197093	Jan. 25, 2012	1005

Issues

Ground 1: Lisogurski + Carlson teach increasing SNR by increasing pulse rate

- Lisogurski's sampling rate feature
- Lisogurski's cardiac cycle modulation
- Lisogurski and Carlson together

Ground 2: Lisogurski, Carlson, Tran

- identify/detect an object (claims 3, 8, 16)

Ground 3: Lisogurski, Carlson, Tran, Isaacson

Ground 4: Lisogurski, Carlson, Tran, Isaacson, Valencell

’484 Patent: Claim 1

Only one limitation is disputed

1. A system for measuring one or more physiological parameters and for use with a smart phone or tablet, the system comprising:

a wearable device adapted to be placed on a wrist or an ear of a user, including a light source comprising a plurality of semiconductor sources that are light emitting diodes, each of the light emitting diodes configured to generate an output optical light having one or more optical wavelengths;

the wearable device comprising one or more lenses configured to receive a portion of at least one of the output optical lights and to direct a lens output light to tissue;

the wearable device further comprising a detection system configured to receive at least a portion of the lens output light reflected from the tissue and to generate an output signal having a signal-to-noise ratio, wherein the detection system is configured to be synchronized to the light source;

wherein the detection system comprises a plurality of spatially separated detectors, and wherein at least one analog to digital converter is coupled to at least one of the spatially separated detectors;

wherein a detector output from the at least one of the plurality of spatially separated detectors is coupled to an amplifier having a gain configured to improve detection sensitivity;

the smart phone or tablet comprising a wireless receiver, a wireless transmitter, a display, a speaker, a voice input module, one or more buttons or knobs, a microprocessor and a touch screen, the smart phone or tablet configured to receive and process at least a portion of the output signal, wherein the smart phone or tablet is configured to store and display the processed output signal, and wherein at least a portion of the processed output signal is configured to be transmitted over a wireless transmission link;

a cloud configured to receive over the wireless transmission link an output status comprising the at least a portion of the processed output signal, to process the received output status to generate processed data, and to store the processed data;

wherein the output signal is indicative of one or more of the physiological parameters, and the cloud is configured to store a history of at least a portion of the one or more physiological parameters over a specified period of time;

the wearable device configured to increase the signal-to noise ratio by increasing light intensity of at least one of the plurality of semiconductor sources from an initial light intensity and **by increasing a pulse rate of at least one of the plurality of semiconductor sources from an initial pulse rate**; and

the detection system further configured to:

generate a first signal responsive to light received while the light emitting diodes are off,

generate a second signal responsive to light received while at least one of the light emitting diodes is on, and

increase the signal-to-noise ratio by comparing the first signal and the second signal.

’484 Patent: Claim 1

Only one limitation is disputed

1. A system for measuring one or more physiological parameters and for use with a smart phone or tablet, the system comprising:

a wearable device adapted to be placed on a wrist or an ear of a user, including a light source comprising a plurality of semiconductor sources that are light emitting diodes, each of the light emitting diodes configured to generate an output optical light having one or more optical wavelengths;

the wearable device comprising one or more lenses configured to receive a portion of at least one of the output optical lights and to direct a lens output light to tissue;

the wearable device further comprising a detection system configured to receive at least a portion of the lens output light reflected from the tissue and to generate an output signal having a signal-to-noise ratio, wherein the detection system is configured to be synchronized to the light source;

wherein the detection system comprises a plurality of spatially separated detectors, and wherein at least one analog to digital converter is coupled to at least one of the spatially separated detectors;

he wearable device configured to increase the signal-to noise ratio by
easing light intensity of at least one of the plurality of semiconductor sources from
nitial light intensity and **by increasing a pulse rate of at least one of the plurality**
emiconductor sources from an initial pulse rate; and

a history of at least a portion of the one or more physiological parameters over a specified period of time;

the wearable device configured to increase the signal-to noise ratio by increasing light intensity of at least one of the plurality of semiconductor sources from an initial light intensity and **by increasing a pulse rate of at least one of the plurality of semiconductor sources from an initial pulse rate**; and

the detection system further configured to:

generate a first signal responsive to light received while the light emitting diodes are off,

generate a second signal responsive to light received while at least one of the light emitting diodes is on, and

increase the signal-to-noise ratio by comparing the first signal and the second signal.

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.