## UNITED STATES PATENT AND TRADEMARK OFFICE BEFORE THE PATENT TRIAL AND APPEAL BOARD

APPLE, INC.,
Petitioner,
v.

OMNI MEDSCI, INC.,
Patent Owner.

IPR2020-00175
Patent 10,188,299 B2

Record of Oral Hearing
Held: March 25, 2021

Before GRACE KARAFFA OBERMANN, JOHN F. HORVATH, and SHARON FENICK, *Administrative Patent Judges*.



## **APPEARANCES:**

## ON BEHALF OF THE PETITIONER:

THOMAS A. BROUGHAN, III, ESQUIRE Sidley & Austin, LLP 1501 K Street, N.W. Washington, D.C. 20005

## ON BEHALF OF THE PATENT OWNER:

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The above-entitled matter came on for hearing on Thursday, March 25, 2021, commencing at 1:06 p.m., EDT, at the U.S. Patent and Trademark Office, by video/by telephone.



- 1 while in the '533 the claim specifies a light source configured to
- 2 increase signal-to-noise ratio.
- While the claim language is different the Lisogurski
- 4 reference is not and the Board's findings about what Lisogurski
- 5 teaches are applicable here because it's the same record, the same
- 6 reference, the same -- argues the same basic evidence.
- If you go to slide 10, there is no, excuse me. If you go to
- 8 slide 10 there is no dispute that Lisogurski's device is configured
- 9 to increase the LED firing rate in some circumstances. If you go
- 10 to the top Dr. MacFarlane, Omni's expert, has admitted this.
- 11 That Lisogurski describes a device that is configured to increase
- 12 the emitter firing rate. And there also should be no dispute that
- doing so will sometimes increase the signal-to-noise ratio. If
- 14 you look at the bottom quote Dr. MacFarlane admitted that
- 15 increasing the firing rate generally will increase signal-to-noise
- 16 ratio and as we looked at on some slides earlier, Omni has
- 17 admitted that tracking heart rate can increase signal-to-noise
- 18 ratio by increasing the LED pulse rate. Thus the evidence
- 19 including Lisogurski's disclosure and Omni's admissions show
- 20 that cardiac cycle modulation is configured to increase signal-to-
- 21 noise ratio by increasing the LED firing rate. However, even if
- 22 Lisogurski alone does not teach something configured to increase
- 23 signal-to-noise ratio, by increasing the pulse rate of an LED
- 24 Lisogurski and Carlson do.
- JUDGE FENICK: Sorry, Mr. Broughan. This is Judge



- 1 Fenick. Before we move on to Lisogurski and Carlson, on your
- 2 slide, the slide that you just showed slide 10 at the bottom says
- 3 that in general if you increase the pulse rate you'll increase the
- 4 signal-to-noise ratio. It sounds to me like this isn't what
- 5 Lisogurski discusses when it discusses cardiac cycle modulation.
- 6 So this portion of the witness's statement, was this describing
- 7 Lisogurski's cardiac cycle modulation or Lisogurski in general?
- 8 It sounds like you want us to take this as the witness admitting
- 9 that this is true in general which is -- is it directed towards
- 10 Lisogurski's cardiac cycle modulation?
- MR. BROUGHAN: No. This was a question answered
- 12 about increasing the pulse rate of an LED generally, not about
- 13 Lisogurski specifically. But the general comment would apply to
- 14 the more specific here, that when you're increasing the pulse
- 15 rate, that will increase signal-to-noise ratio.
- 16 JUDGE FENICK: My understanding of the cardiac cycle
- 17 modulation is it tracks the cardiac cycle of the wearer and so if
- 18 that cardiac cycle decreases you would need to decrease the
- 19 pulse rate to increase the signal-to-noise ratio. So this doesn't
- 20 seem to be, this general description doesn't seem to be describing
- 21 the cardiac cycle modulation.
- MR. BROUGHAN: That's correct, Your Honor. It is not
- 23 specifically describing cardiac cycle modulation but still the
- 24 general principle behind it I believe is true which is that if you're
- 25 increasing the pulse rate, as a general matter that will increase

