

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

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APPLE, INC.,

Petitioner,

v.

OMNI MEDSCI, INC.,

Patent Owner.

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IPR2020-00175  
Patent 10,188,299 B2

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Record of Oral Hearing  
Held: March 25, 2021

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

APPEARANCES:

ON BEHALF OF THE PETITIONER:

THOMAS A. BROUGHAN, III, ESQUIRE  
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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.

3 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.

7 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  
13 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.

25 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?

11 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.

22 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