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**NOTICE OF APPEAL FROM THE EXAMINER TO  
THE PATENT TRIAL AND APPEAL BOARD**

Docket Number (Optional)

3-00051-836EPR

I hereby certify that this correspondence is being facsimile transmitted to the USPTO, EFS-Web transmitted to the USPTO, or deposited with the United States Postal Service with sufficient postage as first class mail in an envelope addressed to "Commissioner for Patents, P.O. Box 1450, Alexandria, VA 22313-1450" [37 CFR 1.8(a)]

on September 22, 2023Signature /Jacob A. Snodgrass/Typed or printed name Jacob A. SnodgrassIn re Application of  
John Usher et al.Application Number  
90/015,146Filed  
October 28, 2022For Acoustic Sealing Analysis SystemArt Unit  
3992Examiner  
Craver, Charles RApplicant hereby **appeals** to the Patent Trial and Appeal Board from the last decision of the examiner.

The fee for this Notice of Appeal is (37 CFR 41.20(b)(1))

\$ 840.00☒ Applicant claims small entity status. See 37 CFR 1.27. Therefore, the fee shown above is reduced by 60%, and the resulting fee is:\$ 336.00☐ A check in the amount of the fee is enclosed.☐ Payment by credit card. Form PTO-2038 is attached.☒ The Director is hereby authorized to charge any fees which may be required, or credit any overpayment to Deposit Account No. 60-3815☐ A petition for an extension of time under 37 CFR 1.136(a) (PTO/SB/22) is enclosed.**WARNING: Information on this form may become public. Credit card information should not be included on this form. Provide credit card information and authorization on PTO-2038.**

I am the

☐ applicant/inventor./Jacob A. Snodgrass/

Signature

☐ assignee of record of the entire interest.  
See 37 CFR 3.71. Statement under 37 CFR 3.73(b) is enclosed.  
(Form PTO/SB/96)Jacob A. Snodgrass

Typed or printed name

☒ attorney or agent of record.  
Registration number 66,032(202) 301-5079

Telephone number

☐ attorney or agent acting under 37 CFR 1.34.  
Registration number if acting under 37 CFR 1.34. \_\_\_\_\_September 22, 2023

Date

NOTE: Signatures of all the inventors or assignees of record of the entire interest or their representative(s) are required. Submit multiple forms if more than one signature is required, see below\*.

☒ \*Total of 1 forms are submitted.

This collection of information is required by 37 CFR 41.31. The information is required to obtain or retain a benefit by the public which is to file (and by the USPTO to process) an application. Confidentiality is governed by 35 U.S.C. 122 and 37 CFR 1.11, 1.14 and 41.6. This collection is estimated to take 12 minutes to complete, including gathering, preparing, and submitting the completed application form to the USPTO. Time will vary depending upon the individual case. Any comments on the amount of time you require to complete this form and/or suggestions for reducing this burden, should be sent to the Chief Information Officer, U.S. Patent and Trademark Office, U.S. Department of Commerce, P.O. Box 1450, Alexandria, VA 22313-1450. DO NOT SEND FEES OR COMPLETED FORMS TO THIS ADDRESS. SEND TO: Commissioner for Patents, P.O. Box 1450, Alexandria, VA 22313-1450.

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**Petitioners' Ex. 1018**  
**Samsung et. al. v. Techiya**  
**IPR2024-01015**  
**Page 00001**

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6. A record in this system of records may be disclosed, as a routine use, to another federal agency for purposes of National Security review (35 U.S.C. 181) and for review pursuant to the Atomic Energy Act (42 U.S.C. 218(c)).
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IN THE UNITED STATES PATENT AND TRADEMARK OFFICE

Control No. : 90/015,146 Confirmation No. 2144  
Patent No. : 10,979,836  
Filing Date : October 28, 2022  
Inventor : John Usher et al.  
Art Unit : 3992  
Examiner : Craver, Charles R  
Docket No. : 34946.105001  
Customer No. : 121055  
Title : ACOUSTIC SEALING ANALYSIS SYSTEM

November 16, 2023

AMENDMENT BEFORE APPEAL BRIEF

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Mail Stop Amendment  
Commissioner for Patents  
P.O. Box 1450  
Alexandria, VA 22313-1450

Commissioner:

Please consider the following remarks and amend the above-identified application as follows:

**Amendments to the Claims** are reflected in the Listing of Claims which begins on page 2 of this paper.

**Remarks** begin on page 8 of this paper.

**CLAIMS APPENDIX**

Claim 1 (original): An earphone configured to perform an eartip fit test comprising:

- a microphone;
- a speaker, where the speaker is configured to emit an audio test signal in response to receiving a test fit signal;
- an eartip, configured to seal the earphone between the first side and a second side of the earphone;
- a memory that stores instructions; and
- a processor, operatively connected to the microphone, where the processor is operatively connected to the speaker, where the processor is operatively connected to the memory, where the processor is configured to execute the instructions to perform operations, the operations comprising:
  - receiving a microphone signal from the microphone;
  - comparing the microphone signal to the test fit signal to determine eartip seal;
  - sending a first message if the eartip seal is above a threshold level indicating a good seal;
  - sending a second message if the eartip seal is below a threshold level, indicating that a new eartip or adjustment of the current eartip is needed.

Claim 2 (original): The earphone according to claim 1, where the audio test signal has a frequency component that is below 1000 Hz.

Claim 3 (original): The earphone according to claim 2, where the frequency component is below 400 Hz.

Claim 4 (original): The earphone according to claim 3, where the first message, if sent, is visually displayed on a device communicatively coupled to the earphone, and where the second message, if sent, is visually displayed on the device communicatively coupled to the earphone.

Claim 5 (original): The earphone according to claim 3, where the eartip is a foam eartip.

Claim 6 (original): The earphone according to claim 3, where the microphone signal is buffered in the memory.

Claim 7 (original): The earphone according to claim 3, where the eartip does not encapsulate a sealed eartip volume when inserted.

Claim 8 (original): The earphone according to claim 6, where the received microphone signal is recording when the audio test signal is being emitted by the speaker.

Claim 9 (currently amended): An earphone configured to perform an eartip fit test comprising:

a first microphone, configured to output a first microphone signal based on a

measurement of sound measured from a first side of the earphone;

a second microphone, configured to output a second microphone signal based on a measurement of sound measured closer to the second side the earphone than the sound measured by the first microphone;

a speaker;

an eartip, configured to seal the earphone between the first side and a second side of the earphone;

a memory that stores instructions; and

a processor, operatively connected to the first microphone, where the processor is operatively connected to the speaker, where the processor is operatively connected to the memory, where the processor is configured to execute the instructions to perform operations, the operations comprising:

- sending a test fit signal to the speaker, where the speaker emits an audio test signal in response to the test fit signal;
- receiving the first microphone signal;
- comparing the first microphone signal to the test fit signal to determine eartip seal;
- sending a first message to a user if the eartip seal is above a threshold level indicating a good seal, where the first message is visually displayed on a device communicatively coupled to the earphone;
- sending a second message to a user if the eartip seal is below a threshold level, indicating that a new eartip or adjustment of the current eartip is needed, where the

second message is visually displayed on the device communicatively coupled to the earphone.

Claim 10 (original): The earphone according to claim 9, where the audio test signal has a frequency component that is below 1000 Hz.

Claim 11 (original): The earphone according to claim 10, where the frequency component is below 400 Hz.

Claim 12 (original): The earphone according to claim 11, where the eartip is a foam eartip.

Claim 13 (original): The earphone according to claim 11, where the eartip does not encapsulate a sealed eartip volume when inserted.

Claim 14 (original): An earphone configured to perform an eartip fit test comprising:

- a microphone, configured to output a microphone signal based on a measurement of sound captured from a first side of the earphone;

- a speaker;

- an eartip, configured to seal the earphone between the first side and a second side of the earphone, where the eartip does not encapsulate a sealed eartip volume when inserted;

a memory that stores instructions and buffers the microphone signal; and  
a processor, operatively connected to the first microphone; where the processor is operatively connected to the speaker, where the processor is operatively connected to the memory, where the processor is configured to execute the instructions to perform operations, the operations comprising:

    sending a test fit signal to the speaker, where the speaker emits an audio test signal in response to the test fit signal;

    retrieving the microphone signal from memory where the time span of the retrieved microphone signal corresponds to the timespan of emission of the audio test signal;

    comparing the retrieved microphone signal to the test fit signal to determine eartip seal;

    sending a first message if the eartip seal is above a threshold level indicating a good seal;

    sending a second message if the eartip seal is below a threshold level, indicating that a new eartip or adjustment of the current eartip is needed.

Claim 15 (original): The earphone according to claim 14, where the audio test signal has a frequency component that is below 1000 Hz.

Claim 16 (original): The earphone according to claim 15, where the frequency component is below 400 Hz.

Claim 17 (original): The earphone according to claim 16, where the first message, if sent, is visually displayed on a device communicatively coupled to the earphone, and where the second message, if sent, is visually displayed on the device communicatively coupled to the earphone.

Claim 18 (original): The earphone according to claim 16, where the eartip is a foam eartip.

Claim 19 (new): The earphone according to claim 1, wherein the test signal is a single frequency signal.

Claim 20 (new): The earphone according to claim 1, wherein the test signal is acoustically masked.

Claim 21 (new): The earphone according to claim 3, wherein the frequency component is below 50 Hz.

Claim 22 (new): The earphone according to claim 1, wherein the operations further comprise sending a test fit signal to the speaker when the test can be performed unobtrusively to the user.

Claim 23 (new): The earphone according to claim 9, wherein the test signal is a single

frequency signal.

Claim 24 (new): The earphone according to claim 9, wherein the test signal is acoustically masked.

Claim 25 (new): The earphone according to claim 11, wherein the frequency component is below 50 Hz.

Claim 26 (new): The earphone according to claim 9, wherein the operations further comprise sending a test fit signal to the speaker when the test can be performed unobtrusively to the user and can provide an accurate test.

Claim 27 (new): The earphone according to claim 14, wherein the test signal is a single frequency signal.

Claim 28 (new): The earphone according to claim 14, wherein the test signal is acoustically masked.

Claim 29 (new): The earphone according to claim 16, wherein the frequency component is below 50 Hz.

Claim 30 (new): The earphone according to claim 14, wherein the operations further

comprise sending a test fit signal to the speaker when the test can be performed unobtrusively to the user and can provide an accurate test.

Claim 31 (cancelled)

Claim 32 (cancelled)

Claim 33 (cancelled)

Claim 34 (cancelled)

Claim 35 (cancelled)

Claim 36 (cancelled)

Claim 37 (cancelled)

Claim 38 (cancelled)

Claim 39 (cancelled)

Claim 40 (cancelled)

Claim 41 (cancelled)

Claim 42 (cancelled)