IN THE UNITED STATES DISTRICT COURT
FOR THE EASTERN DISTRICT OF VIRGINIA
ALEXANDRIA DIVISION

SOUNDCLEAR TECHNOLOGIES LLC, Plaintiff, v. GOOGLE LLC, Defendant.	Case No. 1:24-cv-1281 Jury Trial Demanded

COMPLAINT FOR PATENT INFRINGEMENT

Plaintiff SoundClear Technologies LLC ("SoundClear") files this complaint against Google LLC (hereinafter collectively "Google" or "Defendant") for infringement of United States Patent Nos. 11,069,337; 11,244,675; and 9,223,487 (the "Patents-in-Suit"), attached here as Exhibits 1-3.

NATURE OF THE ACTION

1. This is an action for patent infringement arising under the patent laws of the United States, 35 U.S.C. §§1 *et seq*.

THE PARTIES

2. SoundClear is a limited liability company organized under the laws of the Commonwealth of Virginia with its principal place of business at 1900 Reston Metro Plaza, Suite 600, Reston, VA 20190.

3. On information and belief, defendant Google is a corporation organized and existing under the laws of the state of Delaware with a principal place of business at 1600 Amphitheatre Parkway, Mountain View, California 94043.

4. On information and belief, Google.com, Inc. may be served with process through its registered agent, Corporation Service Company, 251 Little Falls Drive, Wilmington, Delaware 19808, or anywhere it may be found.

5. Google does business across the United States, including in the Commonwealth of Virginia and, more specifically, in the Eastern District of Virginia through at least its offices at 1900 Reston Metro Plaza, Reston, Virginia 20190.

6. On information and belief, Google has been authorized to transact business in the Commonwealth of Virginia and the Eastern District of Virginia since on or about October 31, 2017, under Virginia Entity ID T0723124.

7. On information and belief, Defendant sells and offers to sell products and services throughout Virginia, including in this judicial district, as well as throughout the United States, and introduces products and services that perform infringing processes into the stream of commerce knowing that they would be used, offered for sale, or sold in this judicial district and elsewhere in the United States.

8. On information and belief, Google has made, used, offered to sell, offered to sell access to, sold, and/or sold access to products and services, including the following specifically accused products and services: (1) Google Home, Google Nest Mini (1st Gen), Google Home Mini (1st Gen), Google Home Max, Google Nest Audio, Google Nest Hub, Google Nest Hub Max, and Google Nest Hub (2nd Gen.), and Google Assistant (collectively "Google Home Products"); (2) Google Nexus/Pixel devices (all generations) (collectively "Google Nexus/Pixel

Products"); (3) Google Assistant built-in smart screen products (collectively "Google Assistant Products"); (4) current or legacy products or services, which use, or have used, one or more of the foregoing products and services as a component product or component service; (5) combinations of products and/or services comprising, in whole or in part, two or more of the foregoing products and services; and, (6) all other current or legacy products and services imported, made, used, sold, or offered for sale by Google that operate, or have operated in a substantially similar manner as the above-listed products and services. (As used herein, one or more of the foregoing products and services are individually and collectively referred to as "the Google Products and Services").

9. On information and belief, Google, as well as the hardware and software components comprising the Google Products and Services and/or that enable the Google Products and Services to operate, including but not limited to servers, server software, webserver software, webserver hardware, email server hardware, email server software, website client software, mobile computing device client application software, networked communications hardware, network routers, network switches, network hubs, WIFI access point hardware, WIFI access point software, point-of-sale hardware, point-of-sale software, back-end hardware, back-end software, cloud-based software, cloud-based hardware, and other hardware and software computing systems and components infringes (literally and/or under the doctrine of equivalents) at least one claim of each of the Patents-in-Suit.

JURISDICTION AND VENUE

10. This civil action arises under the Patent Laws of the United States, 35 U.S.C. § 1 *et seq*. Accordingly, this Court has subject matter jurisdiction under at least 28 U.S.C. §§ 1331 and 1338(a).

11. This Court has general and specific personal jurisdiction over Google because it regularly conducts and solicits business, or otherwise engages in other persistent courses of conduct in this judicial district, and/or derives substantial revenue from the use, sale, and distribution of goods and services, including but not limited to the accused Google Products and Services provided to individuals and businesses in the Eastern District of Virginia.

12. Google has committed and continues to commit acts of infringement within this district and, thereby, giving rise to this action and establishing minimum contacts with this forum such that the exercise of jurisdiction over Google would not offend traditional notion of fair play and substantial justice. Google has employees, offices, and facilities in this District and has purposefully conducted and continues to purposefully conduct business in this District, as demonstrated by (a) Google's maintenance of regular and established places of business in this District, including its office at 1900 Reston Metro Plaza, Reston, VA 20190 (*see* https://www.restonnow.com/2021/03/18/just-in-google-to-lease-more-space-at-reston-station/), (b) Google's advertisement of 65 available job postings for its Reston office as of April 2023 (*see* https://www.google.com/about/careers/applications/locations/reston/), and, (c) Google's economic impact report stating that Google also provided "more than 475,000 Virginia businesses" with "direct connections to their customers" in 2021 including by, *inter alia*, providing directions requested by a user, and has invested $1.2 billion in Loudoun County, VA, including investments in the construction and maintenance of multiple data centers. (*See id.*; https://www.google.com/about/datacenters/locations/loudoun-county/).

13. Google has previously submitted to the jurisdiction of this Court.

14. Venue is proper pursuant to 28 U.S.C. §§ 1391 and/or 1400(b), at least because Google has committed acts of infringement in this judicial district and has a regular and established places of business in this judicial district.

THE ASSERTED PATENTS

U.S. Patent No. 11,069,337

15. On July 20, 2021, the United States Patent and Trademark Office ("USPTO") duly and legally issued United States Patent No. 11,069,337 ("the '337 patent") entitled "Voice-Content Control Device, Voice-Content Control Method, and Non-Transitory Storage Medium" to inventor Tatsumi Naganuma.

16. The '337 patent is presumed valid under 35 U.S.C. § 282.

17. SoundClear owns all rights, title, and interest in the '337 patent.

18. SoundClear has not granted Defendant an approval, an authorization, or a license to the rights under the '337 patent.

19. The '337 relates to, among other things, a voice-content control device and method, that, "classif[ies] [an] … acquired voice as either one of a first voice and a second voice" and "adjust[s] the sound volume of voice data" based on the classification of the acquired voice. '337 patent, Col. 19, lines 26-27, Col. 20 lines 4-9; *see also, e.g., id.*, Col. 1, line 66 through Col. 2 line 11.

20. The method "calculat[es] a distance between a user and a voice-content control device" and "analyz[es] the acquired voice … based on the distance." *Id.*, Col. 19, lines 23-28; *see also, e.g., id.*, Col. 1, line 66 through Col. 2 line 11.

21. This manner of voice-content control allows for the "influence of the output voice to people other than the user … to be suppressed, and the content of the output voice to the user … to be made adequately understandable." *Id*., Col. 1, lines 39-42.

U.S. Patent No. 11,244,675

22. On February 8, 2022, the USPTO duly and legally issued United States Patent No. 11,244,675 ("the '675 patent") entitled "Word Replacement in Output Generation for Detected Intent by Voice Classification" to inventor Tatsumi Naganuma.

23. The '675 patent is presumed valid under 35 U.S.C. § 282.

24. SoundClear owns all rights, title, and interest in the '675 patent.

25. SoundClear has not granted Defendant an approval, an authorization, or a license to the rights under the '675 patent.

26. The '675 patent relates to, among other things, an output-content control device and method, that, "acquir[es] a voice spoken by a user" and "classif[ies] the voice into either a first voice or a second voice" and generating output sentences with different information based on the classification of the acquired voice. '675 patent, Col. 22, lines 9-12 and 20-28; *see also, e.g., id.*, Col. 1, line 62 through Col. 2 line 8.

27. The method "calculat[es] a distance between the user and an output-content control device by a proximity sensor" and "classif[ies] the acquired voice … based on the calculated distance." *Id.*, Col. 22, lines 10-13; *see also, e.g., id.*, Col. 1, line 63 through Col. 2, line 8.

28. This manner of output-content control allows for "a content of notification in response to an inquiry of a user difficult to be understood by people other than the user when the content of the notification is output." *Id.*, Col. 1, lines 35-37.

U.S. Patent No. 9,223,487

29. On December 29, 2015, the USPTO duly and legally issued United States Patent No. 9,223,487 ("the '487 patent") entitled "Electronic Apparatus, Method of Controlling the Same, and Related Computer Program" to inventor Yoshie Maeda.

30. The '487 patent is presumed valid under 35 U.S.C. § 282.

31. SoundClear owns all rights, title, and interest in the '487 patent.

32. SoundClear has not granted Defendant an approval, an authorization, or a license to the rights under the '487 patent.

33. The '487 patent relates to, among other things, an electronic apparatus and method of controlling an electronic apparatus using "a touch panel superposed on the display and acquiring positions of the user's touches to the touch panel as touch positions." '487 patent, Col. 23, lines 52-54; *see also, e.g., id.*, Col. 4, lines 44-62.

34. The method determines "whether or not the calculated distance between the first and second touch positions decreases in accordance with the lapse of time," and sets a "rectangular area and select[s] the object or objects contained in the rectangular area in cases where … the distance between the first and second touch positions decreases in accordance with the lapse of time, the first angle is smaller than the prescribed angle, and the second angle is smaller than the prescribed angle." *Id.*, Col. 23, lines 59-61; Col. 24, lines 21-27; *see also, e.g., id.*, Col. 4, lines 44-62.

35. This manner of controlling an electronic apparatus "allow[s] a user to give a command for a process by easy operation." *Id.*, Col. 5, lines 20-21.

BACKGROUND OF THE INVENTIONS

36. These patents have been generated by the R&D engineers of a major audio processing product power house, namely JVC, now known as JVC Kenwood ("JVCK").

37. JVCK is well known for producing quality, leading-edge audio and associated products and has a long and esteemed history in doing so.

38. The Patents-in-Suit were developed within the R&D department of JVCK, which consisted of many thousands of professional engineers spread over a number of R&D facilities.

39. Over the years, JVCK employed the host of audio technologies that it developed to bring forward an array of leading-edge products to market.

40. JVCK typically invested $260m in R&D per year to develop commercially viable technologies capable of generating substantial revenues.

41. JVCK has, for various reasons, realigned its technology focus over recent years, which has led the company to divest a number of patents it developed.

42. SoundClear has acquired these patents and has worked to identify companies that it believes are utilizing the technologies and profiting from the claimed inventions.

CLAIMS FOR RELIEF

COUNT I - Infringement of the '337 patent

43. SoundClear repeats, realleges, and incorporates by reference, as if fully set forth here, the allegations of the preceding paragraphs above.

44. On information and belief, Defendant (or those acting on their behalf) make, use, sell, sell access to, import, offer to sell and/or offer to sell access to the Google Products and Services in the United States that infringe (literally and/or under the doctrine of equivalents) at least claim 4 of the '337 patent.

45. On information and belief, one or more components of the Google Products and Services is, employs, or provides a voice-content control method (*e.g.*, a method for receiving and processing voice sound signals), comprising of several method steps. On information and belief and as an example, one or more Google Products and Services receive user voice inputs through a microphone, is connected to Google servers, and receives information from Google that is then relayed to the user via its speaker. *See* https://www.ifixit.com/Teardown/Google+Home+Teardown/72684; https://www.gadgetguy.com.au/google-nest-audio-sounds-pretty-good-to-me/.

46. On information and belief, one or more components of the Google Products and Services is, employs, or provides a voice-content control method comprising calculating a distance (*e.g.*, using ultrasound sensing, camera sensing, and/or an algorithm for detecting the location of the voice audio source (*e.g.*, "neural network adaptive beamforming (NAB)")) between a user (*e.g.*, a person within range of a Home/Nest device) and a voice-content control device (*e.g.*, a Home/Nest device). On information and belief and as an example, one or more components of Google Products and Services use "ultrasound sensing" to "determine whether a person is approaching the device." *See* https://support.google.com/googlenest/answer/9509981?hl=en#zippy=%2Cgoogle-nest-displays. On information and belief and as a further example, Google Products and Services perform this feature by "emit[ting] soft, inaudible ultrasonic pulses" through its speaker, which are "reflected off of nearby objects in the room and the microphones to detect these reflections." *See id*. On information and belief, Google Products and Services use ultrasound sensing to determine how close a person is to the device. *See id*; *see also* https://support.google.com/googlenest/answer/9330256;

https://www.theverge.com/2019/12/5/20996723/nest-hub-ultrasonic-proximity-sensor-explainer; https://www.theverge.com/2019/11/6/20951602/google-nest-hub-max-ultrasonic-sensing-timer-commute-weather. On information and belief and as further example, Google Products and Services use "cameras" to "detect things like motion, activity, people or gestures." *See* https://support.google.com/googlenest/answer/9330256. On information and belief, Google Products and Services use "camera sensing" at least with its "Face Match," "Quick Gestures," and "Look and Talk" features. *See* https://support.google.com/googlenest/answer/9449279. Further, as an example, one or more Google Products and Services "filter[] for proximity using the detected face box size to infer distance" and when a user "looks at the Nest Hub Max within 5ft of distance, gray dots appear, indicating that Assistant is ready to take user queries." *See* https://research.google/blog/look-and-talk-natural-conversations-with-google-assistant/?m=1. *See also* https://support.google.com/googlenest/answer/9330256; https://support.google.com/googlenest/answer/9449279. On information and belief and as an example, one or more Google Products and Services include and/or utilize hardware and software that perform a "neural beamforming" technique which determines the location of the audio source. *See* https://www.youtube.com/watch?v=vWLcyFtni6U at 5:29-5:49. On information and belief, Google's neural beamforming technique is also called "neural network adaptive beamforming (NAB)." *See* https://static.googleusercontent.com/media/research.google.com/en/pubs/archive/45399.pdf. On information and belief and as a further example, Google's NAB process uses "[Long Short-Term Memory] LSTM layers to predict time domain beamforming filter coefficients at each input frame," thus allowing the algorithm to "adapt to previously unseen or changing conditions." *See id*. at 1. The "responses in the target speech direction have relatively more speech-dependent

variations than those in the noise direction[]" and Google Products and Services rely on "principles of delay-and-sum (DS) beamforming to perform the NAB process. *See id*. Further, on information and belief and as an example, Google Products and Services use a spectral distortion model for training phase-sensitive deep-neural networks for far-field speech recognition that relies on phase difference (PD) principles. *See* https://static.googleusercontent.com/media/research.google.com/en/pubs/archive/46600.pdf; *see also* https://www.youtube.com/watch?v=vWLcyFtni6U at 5:29-5:49. On information and belief and as an example, Google Products and Services are operably connected across devices to detect motion and have "Activity Sensors" that can detect motion, proximity, and/or presence of nearby objects. *See* https://support.google.com/googlenest/answer/9330256; *see also* https://www.itechpost.com/articles/113995/20220924/google-home-can-now-use-nest-hub-and-speakers-to-detect-presence.htm.

47. On information and belief, one or more components of the Google Products and Services is, employs, or provides a voice-content control method comprising acquiring (*e.g.*, using microphones and hardware/software to receive and process voice sounds) a voice spoken by a user (*e.g.*, a voice sound). On information and belief and as an example, Google Products and Services use microphones to acquire voice sounds, which include two microphones that form a microphone array, and which receives audio from one or more sound sources including the voice of a person. *See* https://www.ifixit.com/Teardown/Google+Home+Teardown/72684. On information and belief and as further example, Google Products and Services use additional hardware components to acquire voice sounds, such as Atmel ATSAMD21 32-bit ARM Cortext-M0+ microcontroller and a processor that controls the operation modes of a transmitter unit. *See* https://www.ifixit.com/Teardown/Google+Home+Teardown/72684. On information and belief

and as an example, Google Products and Services use software components to acquire voice sounds, including software associated with Google Assistant and/or a keyword spotting system (KWS) to process voice sounds. *See* https://static.googleusercontent.com/media/research.google.com/en/pubs/archive/46554.pdf; https://support.google.com/googlenest/answer/9325085?hl=en; https://developers.google.com/assistant/how-assistant-works/understanding-your-request; https://developers.home.google.com/local-home/overview; https://developers.google.com/assistant/sdk/device-actions-overview; https://youtu.be/LcuouG7Ofpc?si=Px-VyCovId57tyP9&t=253; https://medium.com/@sweetmantech/how-google-assistant-works-7738b7ba08aa.

48. On information and belief, one or more components of the Google Products and Services is, employs, or provides a voice-content control method comprising analyzing the acquired voice (*e.g.*, the signal representing the voice sound) to classify the acquired voice as either one of a first voice (*e.g.*, the voice of a particular first person, or a near/close voice) and a second voice (*e.g.*, the voice of a particular second person, or a far/distant voice) based on the distance between the user and the voice-content control device. On information and belief and as an example, one or more Google Products and Services analyze an acquired voice signal and classify it as a first voice or a second voice and is capable of classifying voices based on a Voice Match profile/model associated with individual users, which ensure personalized results such as a user's playlist, calendar, etc. when the user's voice is detected. *See* https://support.google.com/assistant/answer/9071681?hl=en&co=GENIE.Platform%3DAndroid; https://support.google.com/assistant/answer/9071681?hl=en&co=GENIE.Platform%3DAndroid#zippy=%2Chow-voice-match-works. On information and belief and as another example, one or

more Google Products and Services classify a voice signal as a first voice (near) or a second voice (far) using, e.g., the ultrasound sensing feature, the camera sensing feature, and/or NAB feature. On information and belief, based on the distance calculated using the ultrasound sensing and camera sensing features, the Google Products and Services determine that the acquired voice sound is originating from a user that is near or far from device and use that information to process the voice sounds accordingly (e.g., to adjust the display/appearance of information presented in response to the acquired voice signal). On information and belief and as another example, based on the distance calculated using the NAB feature (e.g., in determining the location of the voice source and the amount of interference and noise acquired), the Google Products and Services determine that the acquired voice sound is originating from a user that is near or far from device and use that information to process the voice sounds accordingly (e.g., to apply enhanced additional noise cancelation/suppression for voice signals that originate further away from the device).

49. On information and belief, one or more components of the Google Products and Services is, employs, or provides a voice-content control method comprising analyzing the acquired voice to execute processing intended by the user (*e.g.*, processing audio signals representing voice sounds and transcribing them into text). On information and belief and as an example, one or more Google Products and Services use on-board processing to analyze the speech input provided by the user, and at least a portion of the speech recognition processing data is sent to the Google cloud for further processing. *See* https://static.googleusercontent.com/media/research.google.com/en/pubs/archive/46554.pdf; https://support.google.com/googlenest/answer/9325085?hl=en; https://developers.google.com/assistant/how-assistant-works/understanding-your-request;

https://developers.home.google.com/local-home/overview; https://developers.google.com/assistant/sdk/device-actions-overview; https://youtu.be/LcuouG7Ofpc?si=Px-VyCovId57tyP9&t=253; https://medium.com/@sweetmantech/how-google-assistant-works-7738b7ba08aa; https://support.google.com/assistant/answer/11140942?hl=en#zippy=%2Cfederated-learning; https://research.google/blog/federated-learning-collaborative-machine-learning-without-centralized-training-data/; https://cloud.google.com/speech-to-text/ondevice/docs; https://youtu.be/LcuouG7Ofpc?si=UwtobCdxAdHZr6DD&t=362.

50. On information and belief, one or more components of the Google Products and Services is, employs, or provides a voice-content control method comprising generating, based on content of the executed processing, output sentence (*e.g.*, information provided by the Home/Nest device in response to the user voice signal acquired by the Home/Nest device) that is text data for a voice to be output to the user. On information and belief and as an example, one or more Google Products and Services, after analyzing the user's voice input by the on-board processor and the Google cloud, output a response that is presented as a text string, which can be further converted into an audio signal using a Text-To-Speech (TTS) unit and audibly output to the user through the Home/Nest device. *See* https://www.youtube.com/watch?v=LcuouG7Ofpc&t=253s; https://www.youtube.com/watch?v=LcuouG7Ofpc&t=525s; https://support.google.com/googlenest/answer/7130274?hl=en; https://medium.com/@sweetmantech/how-google-assistant-works-7738b7ba08aa.

51. On information and belief, one or more components of the Google Products and Services is, employs, or provides a voice-content control method comprising adjusting (*e.g.*,

using Ambient IQ) a sound volume of voice data obtained by converting the output sentence thereinto. On information and belief and as an example, Google Products and Services use the Ambient IQ feature, which allows the automatic adjustment of volume of Google Assistant's voice response according to the ambient noise. *See* https://blog.google/intl/en-in/products/hardware/made-for-music-new-nest-audio-is-here/.

52. On information and belief, one or more components of the Google Products and Services is, employs, or provides a voice-content control method comprising wherein at the generating, a first output sentence (*e.g.*, a first set of information provided by the Home/Nest device in response to the user voice signal acquired by the Home/Nest device) is generated as the output sentence when the acquired voice has been classified as the first voice, and a second output sentence (*e.g.*, a second set of information provided by the Home/Nest device in response to the user voice signal acquired by Home/Nest device) is generated as the output sentence in which a part of information included in the first output sentence is omitted when the acquired voice has been classified as the second voice (*e.g.*, the second set of information includes less or different information than the first set). On information and belief and as an example, one or more Google Products and Services can display and/or audibly present different information depending on whether an acquired voice has been classified as one that corresponds to one particular user or another, and Google Assistant generates personalized voice and/or visual responses using Voice Match, in order to recognize a user by their voice and provide the user with personalized results (e.g., their calendar schedule, music playlist, etc.). *See* https://support.google.com/assistant/answer/9071681?hl=en&co=GENIE.Platform%3DAndroid; https://support.google.com/assistant/answer/9071681?hl=en&co=GENIE.Platform%3DAndroid#zippy=%2Chow-voice-match-works;

https://support.google.com/assistant/answer/9071681?hl=en&co=GENIE.Platform%3DAndroid#zippy=%2Chow-voice-match-works%2Cvoice-match-personal-results.

53. On information and belief, one or more components of the Google Products and Services is, employs, or provides a voice-content control method comprising wherein at adjusting the sound volume of voice data, further adjusting the sound volume of voice data such that the sound volume of voice data obtained by converting the first output sentence thereinto differs (*e.g.*, is output at a higher/lower volume) from the sound volume of voice data obtained by converting the second output sentence thereinto. On information and belief and as an example, Google Products and Services maintain Ambient IQ, which automatically adjusts the volume of Google Assistant's voice response. *See* https://blog.google/intl/en-in/products/hardware/made-for-music-new-nest-audio-is-here/. On information and belief and as further example, if the acquired voice signal includes significant sound interference signals, Google Products and Services can increase the volume of its response compared to the volume of its response if fewer interference signals were detected. *See id*.

54. On information and belief, Defendant directly infringe at least claim 4 of the '337 patent in violation of 35 U.S.C. § 271(a) by making, using, selling, selling access to, importing, offering for sale, and/or offering to sell access to the Google Products and Services.

55. Defendant' infringement has damaged SoundClear and caused / continues to cause it to suffer irreparable harm and damages.

COUNT II - Infringement of the '675 patent

56. SoundClear repeats, realleges, and incorporates by reference, as if fully set forth here, the allegations of the preceding paragraphs above.

57. On information and belief, Defendant (or those acting on their behalf) make, use, sell, sell access to, import, offer to sell and/or offer to sell access to the Google Products and Services in the United States that infringes (literally and/or under the doctrine of equivalents) at least claim 6 of the ’675 patent.

58. On information and belief, one or more components of the Google Products and Services is, employs, or provides an output-content control method (*e.g.*, a method for receiving and processing voice sound signals), comprising several method steps. On information and belief and as an example, one or more Google Products and Services receive user voice inputs through a microphone, is connected to Google servers, and receives information from Google that is then relayed to the user via its speaker. *See* https://www.ifixit.com/Teardown/Google+Home+Teardown/72684; https://www.gadgetguy.com.au/google-nest-audio-sounds-pretty-good-to-me/.

59. On information and belief, one or more components of the Google Products and Services is, employs, or provides an output-content control method comprising acquiring (*e.g.*, using microphones and hardware/software to receive and process voice sounds) a voice spoken by a user (*e.g.*, a voice sound). On information and belief and as an example, Google Products and Services use microphones to acquire voice sounds, which include two microphones that form a microphone array, and which receives audio from one or more sound sources including the voice of a person. *See* https://www.ifixit.com/Teardown/Google+Home+Teardown/72684. On information and belief and as further example, Google Products and Services use additional hardware components to acquire voice sounds, such as Atmel ATSAMD21 32-bit ARM Cortext-M0+ microcontroller and a processor that controls the operation modes of a transmitter unit. *See* https://www.ifixit.com/Teardown/Google+Home+Teardown/72684. On information and belief

and as an example, Google Products and Services use software components to acquire voice sounds, including software associated with Google Assistant and/or a keyword spotting system (KWS) to process voice sounds. *See* https://static.googleusercontent.com/media/research.google.com/en/pubs/archive/46554.pdf; https://support.google.com/googlenest/answer/9325085?hl=en; https://developers.google.com/assistant/how-assistant-works/understanding-your-request; https://developers.home.google.com/local-home/overview; https://developers.google.com/assistant/sdk/device-actions-overview; https://youtu.be/LcuouG7Ofpc?si=Px-VyCovId57tyP9&t=253; https://medium.com/@sweetmantech/how-google-assistant-works-7738b7ba08aa.

60. On information and belief, one or more components of the Google Products and Services is, employs, or provides an output-content control method comprising calculating a distance (*e.g.*, using ultrasound sensing, camera sensing, and/or an algorithm for detecting the location of the voice audio source (*e.g.*, "neural network adaptive beamforming (NAB)")) between a user (*e.g.*, a person within range of a Home/Nest device) and an output-content control device (e.g., a Home/Nest device) by a proximity sensor (*e.g.*, hardware/software associated with camera ultrasound sensing, camera sensing, and/or algorithms for detecting the location of voice audio sources) to classify the voice (*e.g.*, the signal representing the voice sound) into either first voice (*e.g.*, the voice of a particular first person, or a near/close voice) based on the calculated distance. On information and belief and as an example, one or more components of Google Products and Services use "ultrasound sensing" to "determine whether a person is approaching the device." *See* https://support.google.com/googlenest/answer/9509981?hl=en#zippy=%2Cgoogle-nest-displays.

On information and belief and as further example, Google Products and Services perform this feature by "emit[ting] soft, inaudible ultrasonic pulses" through its speaker, which are "reflected off of nearby objects in the room and the microphones to detect these reflections." *See id*. On information and belief, Google Products and Services use ultrasound sensing to determine how close a person is to the device. *See id*; *see also* https://support.google.com/googlenest/answer/9330256; https://www.theverge.com/2019/12/5/20996723/nest-hub-ultrasonic-proximity-sensor-explainer; https://www.theverge.com/2019/11/6/20951602/google-nest-hub-max-ultrasonic-sensing-timer-commute-weather. On information and belief and as further example, Google Products and Services use "cameras" to "detect things like motion, activity, people or gestures." *See* https://support.google.com/googlenest/answer/9330256. On information and belief, Google Products and Services use "camera sensing" at least with its "Face Match," "Quick Gestures," and "Look and Talk" features. *See* https://support.google.com/googlenest/answer/9449279. Further, on information and belief and as another example, one or more Google Products and Services "filter[] for proximity using the detected face box size to infer distance" and when a user "looks at the Nest Hub Max within 5ft of distance, gray dots appear, indicating that Assistant is ready to take user queries." *See* https://research.google/blog/look-and-talk-natural-conversations-with-google-assistant/?m=1; *see also* https://support.google.com/googlenest/answer/9330256; https://support.google.com/googlenest/answer/9449279. On information and belief and as an example, one or more Google Products and Services include and/or utilize hardware and software that perform a "neural beamforming" technique which determines the location of the audio source. *See* https://www.youtube.com/watch?v=vWLcyFtni6U at 5:29-5:49. On

information and belief, Google's neural beamforming technique is also called "neural network adaptive beamforming (NAB)." *See* https://static.googleusercontent.com/media/research.google.com/en/pubs/archive/45399.pdf. On information and belief and as further example, Google's NAB process uses "[Long Short-Term Memory] LSTM layers to predict time domain beamforming filter coefficients at each input frame," thus allowing the algorithm to "adapt to previously unseen or changing conditions." *See id*. at 1. The "responses in the target speech direction have relatively more speech-dependent variations than those in the noise direction[]" and Google Products and Services rely on "principles of delay-and-sum (DS) beamforming to perform the NAB process. *See id*. Further, on information and belief and as an example, Google Products and Services use a spectral distortion model for training phase-sensitive deep-neural networks for far-field speech recognition that relies on phase difference (PD) principles. *See* https://static.googleusercontent.com/media/research.google.com/en/pubs/archive/46600.pdf; *see also* https://www.youtube.com/watch?v=vWLcyFtni6U at 5:29-5:49. On information and belief and as an example, Google Products and Services are operably connected across devices to detect motion and have "Activity Sensors" that can detect motion, proximity, and/or presence of nearby objects. *See* https://support.google.com/googlenest/answer/9330256; *see also* https://www.itechpost.com/articles/113995/20220924/google-home-can-now-use-nest-hub-and-speakers-to-detect-presence.htm. On information and belief and as an example, one or more components of Google Products and Services analyze an acquired voice signal and classify it as a first voice or a second voice, using Google Assistant, and classify voices based on a Voice Match profile/model associated with individual users, which ensures personalized results, such as a user's playlist, calendar, etc. when the user's voice is detected. *See*

https://support.google.com/assistant/answer/9071681?hl=en&co=GENIE.Platform%3DAndroid; https://support.google.com/assistant/answer/9071681?hl=en&co=GENIE.Platform%3DAndroid#zippy=%2Chow-voice-match-works.

61. On information and belief, one or more components of the Google Products and Services is, employs, or provides an output-content control method comprising analyzing the acquired voice (*e.g.*, the signal representing the voice sound) to detect intention information (*e.g.*, the target of the voice request/query) indicating what kind of information is wished to be acquired by the user (*e.g.*, processing audio signals representing voice sounds, transcribing them into text, and analyzing the text to determine the target of the voice request/query). On information and belief, one or more Google Products and Services use on-board processing to analyze the speech input provided by the user, and at least a portion of the speech recognition processing data is sent to the Google cloud for further processing. *See* https://developers.google.com/assistant/how-assistant-works/understanding-your-request; https://static.googleusercontent.com/media/research.google.com/en/pubs/archive/46554.pdf; https://support.google.com/googlenest/answer/9325085?hl=en; https://developers.home.google.com/local-home/overview; https://developers.google.com/assistant/sdk/device-actions-overview; https://www.youtube.com/watch?v=LcuouG7Ofpc&t=253s; https://medium.com/@sweetmantech/how-google-assistant-works-7738b7ba08aa; https://support.google.com/assistant/answer/11140942?hl=en#zippy=%2Cfederated-learning; https://research.google/blog/federated-learning-collaborative-machine-learning-without-centralized-training-data/; https://cloud.google.com/speech-to-text/ondevice/docs; https://www.youtube.com/watch?v=LcuouG7Ofpc&t=356s;

https://www.youtube.com/watch?v=LcuouG7Ofpc&t=429s;

https://www.youtube.com/watch?v=LcuouG7Ofpc&t=476s;

https://www.youtube.com/watch?v=LcuouG7Ofpc&t=362s;

https://www.youtube.com/watch?v=LcuouG7Ofpc&t=416s.

62. On information and belief, one or more components of the Google Products and Services is, employs, or provides an output-content control method comprising acquiring notification information which includes content information (*e.g.*, information provided by the Home/Nest device in response to the user voice signal acquired by Home/Nest device) as a content of information to be notified to the user based on the intention information. On information and belief and as an example, one or more Google Products and Services analyze the user's voice input by the on-board processor and the Google cloud, using Google Assistant, obtain the relevant output for the user's request, the output is content information that is provided to the user via a display or text-to-speech, which consequently notifies the user about the information and identifies the user's intention to know the requested information. *See* https://www.youtube.com/watch?v=LcuouG7Ofpc&t=253s;

https://www.youtube.com/watch?v=LcuouG7Ofpc&t=525s;

https://support.google.com/googlenest/answer/7130274?hl=en;

https://medium.com/@sweetmantech/how-google-assistant-works-7738b7ba08aa;

https://support.google.com/assistant/answer/7678386.

63. On information and belief, one or more components of the Google Products and Services is, employs, or provides an output-content control method comprising generating, when the voice is determined to be the first voice, a first output sentence (*e.g.*, a first set of information provided by the Home/Nest device in response to the user voice signal acquired by Home/Nest

device) in which at least one word selected among words included in the content information of the notification information is replaced with another word (*e.g.*, filtering/customizing information based on a particular user and/or the proximity of that user to the Home/Nest device). On information and belief and as an example, one or more Google Products and Services can display and/or audibly present different information depending on whether an acquired voice has been classified as one that corresponds to one particular user or another, and Google Assistant generates personalized voice and/or visual responses using Voice Match, in order to recognize a user by their voice and provide the user with personalized results (e.g., their calendar schedule, music playlist, etc.). *See* https://support.google.com/assistant/answer/9071681?hl=en&co=GENIE.Platform%3DAndroid; https://support.google.com/assistant/answer/9071681?hl=en&co=GENIE.Platform%3DAndroid#zippy=%2Chow-voice-match-works; https://support.google.com/assistant/answer/9071681?hl=en&co=GENIE.Platform%3DAndroid#zippy=%2Chow-voice-match-works%2Cvoice-match-personal-results; https://support.google.com/assistant/answer/7678386; https://www.youtube.com/watch?v=LcuouG7Ofpc&t=253s; https://www.youtube.com/watch?v=LcuouG7Ofpc&t=525s; https://support.google.com/assistant/answer/7684543?sjid=12816414852082100022-AP. On information and belief and as an example, one or more Google Products and Services use Google Assistant and Voice Match to ensure any personal results of a user are not disclosed to any other users. *See id*.

64. On information and belief, one or more components of the Google Products and Services is, employs, or provides an output-content control method comprising generating, when

the voice is determined to be the second voice, a second output sentence (*e.g.*, a second set of information provided by the Home/Nest device in response to the user voice signal acquired by Home/Nest device) which includes all of the intention information and the content information (*e.g.*, unfiltered/non-customized content information based on a particular user and/or the proximity of that user to the Home/Nest device). On information and belief, a user's status and/or proximity to the Google Products and Services (e.g., a Home/Nest device) can cause more/additional content information to be displayed and/or audibly transmitted. *See* https://support.google.com/assistant/answer/9071681?hl=en&co=GENIE.Platform%3DAndroid; https://support.google.com/assistant/answer/9071681?hl=en&co=GENIE.Platform%3DAndroid#zippy=%2Chow-voice-match-works; https://support.google.com/assistant/answer/9071681?hl=en&co=GENIE.Platform%3DAndroid#zippy=%2Chow-voice-match-works%2Cvoice-match-personal-results; https://support.google.com/assistant/answer/7678386; https://www.youtube.com/watch?v=LcuouG7Ofpc&t=253s; https://www.youtube.com/watch?v=LcuouG7Ofpc&t=525s; https://support.google.com/assistant/answer/7684543?sjid=12816414852082100022-AP.

65. On information and belief, Defendant directly infringe at least claim 6 of the '675 patent in violation of 35 U.S.C. § 271(a) by making, using, selling, selling access to, importing, offering for sale, and/or offering to sell access to the Google Products and Services.

66. Defendant' infringement has damaged SoundClear and caused / continues to cause it to suffer irreparable harm and damages.

COUNT III - Infringement of the ’487 patent

67. SoundClear repeats, realleges, and incorporates by reference, as if fully set forth here, the allegations of the preceding paragraphs above.

68. On information and belief, Defendant (or those acting on their behalf) make, use, sell, sell access to, import, offer to sell and/or offer to sell access to the Google Products and Services in the United States that infringes (literally and/or under the doctrine of equivalents) at least claim 11 of the ’487 patent.

69. On information and belief, one or more components of the Google Products and Services is, employs, or provides a method of controlling an electronic apparatus (*e.g.*, a Google Product), comprising several method steps. On information and belief and as an example, one or more Google Products and Services perform a variety of display functions on a screen of a device. *See* https://store.google.com/category/nest_hubs_displays?hl=en-US; https://store.google.com/product/pixel_tablet?hl=en-US&selections=eyJwcm9kdWN0RmFtaWx5IjoiY0dsNFpXeGZkR0ZpYkdWMCJ9; https://support.google.com/googlenest/answer/7072284?hl=en#zippy=.

70. On information and belief, one or more components of the Google Products and Services is, employs, or provides a method of controlling an electronic apparatus, comprising indicating objects on a display (*e.g.*, displaying visual text, images, and representations of objects on an electronic touchscreen). On information and belief and as an example, one or more Google Products and Services include a digital screen for displaying images, information, and icons for controlling the Google Products and Services and other linked products and services. For example, Google Products and Services indicate a time, temperature, weather forecast, calendar events, and icons for accessing software applications through the device. *See*

https://store.google.com/category/nest_hubs_displays?hl=en-US; https://store.google.com/product/pixel_tablet?hl=en-US&selections=eyJwcm9kdWN0RmFtaWx5IjoiY0dsNFpXeGZkR0ZpYkdWMCJ9; https://store.google.com/category/phones?hl=en-US&selections=eyJwcm9kdWN0RmFtaWx5IjoiY0dsNFpXeGZkR0ZpYkdWMCJ9; https://support.google.com/googlenest/answer/7072284?hl=en#zippy=; https://store.google.com/product/google_nest_hub_max?hl=en-US; https://www.youtube.com/watch?v=8pwCo3qYqX4.

71. On information and belief, one or more components of the Google Products and Services is, employs, or provides a method of controlling an electronic apparatus, comprising detecting user's touches to a touch panel (*e.g.*, the touch-sensitive capability of touchscreen that correlates the location of a touch position relative to information, icons, objects, etc. being displayed) superposed on the display and acquiring (*e.g.*, determining) positions of the user's touches to the touch panel as touch positions (*e.g.*, location of a touch position relative to information, icons, objects, etc. being displayed). On information and belief and as an example, one or more Google Products and Services include a touchscreen that enables the device to detect when a user touches the touchscreen. *See* https://www.youtube.com/watch?v=8pwCo3qYqX4 ("pinch with two fingers to zoom in and out"); https://support.google.com/googlenest/answer/9167457?hl=en; https://support.google.com/googlenest/answer/9137285?hl=en#zippy=%2Cwith-nest-hub-max; https://support.google.com/googlenest/answer/9251364?hl=en-AU&sjid=11923792830514154486-AP#zippy=%2Czoom-in-or-out-of-your-cameras-video. On information and belief and as further example, one or more Google Products and Services

acquire the positions of the user's touch(es) relative to the display/interface that indicates information and objects. S*ee id*.; *see also* https://store.google.com/category/nest_hubs_displays?hl=en-US; https://www.youtube.com/watch?v=8pwCo3qYqX4.

72. On information and belief, one or more components of the Google Products and Services is, employs, or provides a method of controlling an electronic apparatus, comprising deciding whether or not first and second touch positions are acquired by the detecting and acquiring step (*e.g.*, determining whether or not the touchscreen is being touched in two places and determining the positions of both of those places). On information and belief and as an example, one or more Google Products and Services are capable of certain functionalities when two touch positions are detected and acquired, thus, to perform its various functions, it must first decide whether or not the first and second touch positions are acquired. *See* https://www.youtube.com/watch?v=8pwCo3qYqX4 ("pinch with two fingers to zoom in and out"); https://support.google.com/googlenest/answer/9167457?hl=en; https://support.google.com/googlenest/answer/9137285?hl=en#zippy=%2Cwith-nest-hub-max; https://support.google.com/googlenest/answer/9251364?hl=en-AU&sjid=11923792830514154486-AP#zippy=%2Czoom-in-or-out-of-your-cameras-video; https://support.google.com/googlenest/answer/9167457?hl=en#zippy=.

73. On information and belief, one or more components of the Google Products and Services is, employs, or provides a method of controlling an electronic apparatus, comprising calculating a distance between the first and second touch positions (*e.g.*, determining the location on the display where the touchscreen is being touched relative to another location where the screen is simultaneously being touched). On information and belief and as an example, one or

more Google Products and Services are capable of certain functionalities when two touch positions that are separated by a distance are detected and acquired. *See* https://www.youtube.com/watch?v=8pwCo3qYqX4 ("pinch with two fingers to zoom in and out"); https://support.google.com/googlenest/answer/9167457?hl=en; https://support.google.com/googlenest/answer/9137285?hl=en#zippy=%2Cwith-nest-hub-max; https://support.google.com/googlenest/answer/9251364?hl=en-AU&sjid=11923792830514154486-AP#zippy=%2Czoom-in-or-out-of-your-cameras-video. On information and belief, one or more Google Products and Services determine the distance between the two touch positions in order to detect that the distance is slightly apart or is being increased or decreased by "pinch[ing] with two fingers[,]" and thus, must calculate a distance between the first and second touch positions." *See id*; *see also* https://support.google.com/googlenest/answer/9167457?hl=en#zippy=.

74. On information and belief, one or more components of the Google Products and Services is, employs, or provides a method of controlling an electronic apparatus, comprising deciding whether or not the calculated distance between the first and second touch positions decreases in accordance with the lapse of time (*e.g.*, determining whether a location on the display where the touchscreen is being touched is becoming closer over time to another location where the screen is simultaneously being touched in order to activate a function (*e.g.*, pan, zoom in, zoom out)). On information and belief and as an example, Google Products and Services have the ability to perform different functions in response to detecting two separate touch positions based on whether or not the distance changes between the two touch positions. *See* https://www.youtube.com/watch?v=8pwCo3qYqX4 ("pinch with two fingers to zoom in and out"); https://support.google.com/googlenest/answer/9167457?hl=en;

https://support.google.com/googlenest/answer/9137285?hl=en#zippy=%2Cwith-nest-hub-max; AU&sjid=11923792830514154486-AP#zippy=%2Czoom-in-or-out-of-your-cameras-video. As further example, on information and belief, Google Products and Services include a "pan" function that is activated by the device determining that the distance between the two touch positions is *not* decreasing or increasing while the user "drag[s] two fingers across the screen." *See id*. Further, the "zoom in" function is activated by the device determining that the distance between the two touch positions is increasing because the user is "pinch[ing]. . .*outward* with two fingers[,]" while the "zoom out" function is activated by the device determining that the distance between the two touch positions is *decreasing* because the user is "pinch[ing] *inward*. . .with two fingers" (emphasis added). *See id*; *see also* https://support.google.com/googlenest/answer/9167457?hl=en#zippy=.

75. On information and belief, one or more components of the Google Products and Services is, employs, or provides a method of controlling an electronic apparatus, comprising setting a rectangular area (*e.g.*, the rectangular area formed based on locations of the two touch positions (e.g., two linearly disposed touch positions)) with respect to the display and selecting an object or objects (*e.g.*, the information, images, icons, in the rectangular area formed based on locations of the two touch positions) contained in the rectangular area in cases (*e.g.*, "zoom out" function) where it is decided that the first and second touch positions are acquired and the distance between the first and second touch positions decreases in accordance with the lapse of time. On information and belief and as an example, Google Products and Services perform a "zoom out" function on the display when the distance between the two touch positions decreases over time. *See* https://www.youtube.com/watch?v=8pwCo3qYqX4 ("pinch with two fingers to zoom in and out"); https://support.google.com/googlenest/answer/9167457?hl=en;

https://support.google.com/googlenest/answer/9137285?hl=en#zippy=%2Cwith-nest-hub-max; https://support.google.com/googlenest/answer/9251364?hl=en-AU&sjid=11923792830514154486-AP#zippy=%2Czoom-in-or-out-of-your-cameras-video. On information and belief and as further example, Google Products and Services perform the zoom function by setting a rectangular area with respect to the display and selecting an object or objects contained in the rectangular area in cases where it is decided that the first and second touch positions are acquired and the distance between the first and second touch positions decreases in accordance with the lapse of time (*e.g.*., two linearly disposed touch positions are moved toward each other simultaneously, or one touch position is moved toward the other touch position). *See id*; *see also* https://support.google.com/googlenest/answer/9167457?hl=en#zippy=.

76. On information and belief, one or more components of the Google Products and Services is, employs, or provides a method of controlling an electronic apparatus, comprising wherein two opposite corners of the rectangular area are respectively coincident with the first and second touch positions occurring at an initial stage (*e.g.*, when the device first detects the two touch positions before one or both touch positions are moved/adjusted to enable the "zoom in" or "zoom out" functions) of the user's touches to the touch panel. On information and belief and as an example, Google Products and Services, prior to zooming in or out on the display, first detect that the two touch positions are disposed linearly (e.g., diagonally) to each other. *See* https://www.youtube.com/watch?v=8pwCo3qYqX4 ("pinch with two fingers to zoom in and out"); https://support.google.com/googlenest/answer/9167457?hl=en; https://support.google.com/googlenest/answer/9137285?hl=en#zippy=%2Cwith-nest-hub-max; https://support.google.com/googlenest/answer/9251364?hl=en-AU&sjid=11923792830514154486-AP#zippy=%2Czoom-in-or-out-of-your-cameras-video; On

information and belief, Google Products and Services detect two touch positions that are two opposite corners of a rectangular area. *See id*.

77. On information and belief, one or more components of the Google Products and Services is, employs, or provides a method of controlling an electronic apparatus, comprising wherein the setting and selecting step comprises deriving a first vector extending from the first touch position occurring at a first moment to the first touch position occurring at a second moment after the first moment (*e.g.*, a vector (e.g., a distance and direction) between the starting position of a touch position and the ending position of that same touch position), deriving a straight line connecting the first and second touch positions occurring at the first moment (*e.g.*, a line between the starting position of each touch position) deriving a second vector extending from the second touch position occurring at the first moment to the second touch position occurring at the second moment (*e.g.*, a vector (e.g., a distance and direction) between the starting position of another touch position and the ending position of that same touch position), calculating a first angle between the first vector and the straight line (*e.g.*, an angle between the vector corresponding to one of the touch positions and the line between the starting positions of each touch position), calculating a second angle between the second vector and the straight line (*e.g.*, an angle between the vector corresponding to one of the touch positions and the line between the starting positions of each touch position), deciding whether or not the first angle is smaller than a prescribed angle (*e.g.*, a reference angle), and deciding whether or not the second angle is smaller than the prescribed angle. On information and belief, Google Products and Services perform a zoom function on the display when two linearly disposed touch positions move toward each other simultaneously, with one touch position moved toward the other. *See* https://www.youtube.com/watch?v=8pwCo3qYqX4 ("pinch with two fingers to zoom in and

out"); https://support.google.com/googlenest/answer/9167457?hl=en; https://support.google.com/googlenest/answer/9137285?hl=en#zippy=%2Cwith-nest-hub-max; https://support.google.com/googlenest/answer/9251364?hl=en-AU&sjid=11923792830514154486-AP#zippy=%2Czoom-in-or-out-of-your-cameras-video). On information and belief, Google Products and Services perform the zoom function by deriving a first vector extending from the first touch position occurring at a first moment to the first touch position occurring at a second moment after the first moment, deriving a straight line connecting the first and second touch positions occurring at the first moment, deriving a second vector extending from the second touch position occurring at the first moment to the second touch position occurring at the second moment, calculating a first angle between the first vector and the straight line, calculating a second angle between the second vector and the straight line, deciding whether or not the first angle is smaller than a prescribed angle, and deciding whether or not the second angle is smaller than the prescribed angle. *See id*.

78. On information and belief, one or more components of the Google Products and Services is, employs, or provides a method of controlling an electronic apparatus, comprising wherein the setting and selecting step further comprises setting the rectangular area and selecting the object or objects contained in the rectangular area in cases where it is decided that the distance between the first and second touch positions decreases in accordance with the lapse of time, the first angle is smaller than the prescribed angle, and the second angle is smaller than the prescribed angle (*e.g.*, zooming in on the information, images, icons, in the rectangular area formed by the two linearly disposed touch positions). On information and belief and as an example, Google Products and Services perform a zoom function on the display when two linearly disposed touch positions move toward each other simultaneously, or one touch position

is moved toward the other. *See* https://www.youtube.com/watch?v=8pwCo3qYqX4 ("pinch with two fingers to zoom in and out"); https://support.google.com/googlenest/answer/9167457?hl=en; https://support.google.com/googlenest/answer/9137285?hl=en#zippy=%2Cwith-nest-hub-max; https://support.google.com/googlenest/answer/9251364?hl=en-AU&sjid=11923792830514154486-AP#zippy=%2Czoom-in-or-out-of-your-cameras-video). On information and belief, Google Products and Services thus perform the zoom function by setting the rectangular area and selecting the object or objects contained in the rectangular area in cases where it is decided that the distance between the first and second touch positions decreases in accordance with the lapse of time, the first angle is smaller than the prescribed angle, and the second angle is smaller than the prescribed angle. *See id*.

79. On information and belief, Defendant directly infringe at least claim 11 of the '487 patent in violation of 35 U.S.C. § 271(a) by making, using, selling, selling access to, importing, offering for sale, and/or offering to sell access to the Google Products and Services.

80. Defendant's infringement has damaged SoundClear and caused / continues to cause it to suffer irreparable harm and damages.

JURY DEMANDED

81. Pursuant to Federal Rule of Civil Procedure 38(b), SoundClear hereby requests a trial by jury on all issues so triable.

PRAYER FOR RELIEF

SoundClear respectfully requests this Court to enter judgment in SoundClear's favor and against Google as follows:

a. finding that Google has infringed one or more claims of the '337 patent under 35 U.S.C. § 271(a);

b. finding that Google has infringed one or more claims of the ’675 patent under 35 U.S.C. § 271(a);

c. finding that Google has infringed one or more claims of the ’487 patent under 35 U.S.C. § 271(a);

d. awarding SoundClear damages under 35 U.S.C. § 284, or otherwise permitted by law, including enhanced damages for willful infringement and/or supplemental damages for any continued post-verdict infringement;

e. awarding SoundClear pre-judgment and post-judgment interest on the damages award and costs;

f. awarding cost of this action (including all disbursements) and attorney fees pursuant to 35 U.S.C. § 285, or as otherwise permitted by the law; and

g. awarding such other costs and further relief that the Court determines to be just and equitable.

Dated: July 25, 2024

Respectfully submitted,

/s/ Chandran B. Iyer

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