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

SOUNDCLEAR TECHNOLOGIES LLC, Plaintiff, v. AMAZON.COM, INC., AMAZON.COM SERVICES LLC, AMAZON WEB SERVICES, INC., Defendants.	Case No. 1:24-cv-1283 Jury Trial Demanded

COMPLAINT FOR PATENT INFRINGEMENT

Plaintiff SoundClear Technologies LLC ("SoundClear") files this complaint against Amazon.com, Inc., Amazon.com Services LLC, and Amazon Web Services, Inc., (hereinafter collectively "Amazon" or "Defendants") for infringement of United States Patent Nos. 11,069,337; 11,244,675; and 9,223,487 (the "Patents-in-Suit"), attached hereto 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, Virginia 20190.

3. On information and belief, defendant Amazon.com, Inc. is a corporation organized and existing under the laws of the state of Delaware with a principal place of business at 410 Terry Ave N, Seattle, Washington 98109-5210.

4. On information and belief, Amazon.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. Amazon.com, Inc. does business across the United States, including in the Commonwealth of Virginia and, more specifically, in the Eastern District of Virginia.

6. On information and belief, defendant Amazon.com Services LLC is a limited liability corporation organized and existing under the laws of the state of Delaware and a wholly-owned subsidiary of Amazon.com, Inc., with a principal place of business at 410 Terry Ave N, Seattle, Washington 98109-5210.

7. On information and belief, Amazon.com Services LLC 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.

8. Amazon.com Services LLC does business across the United States, including in the Commonwealth of Virginia and, more specifically, in the Eastern District of Virginia.

9. On information and belief, defendant Amazon Web Services, Inc. ("AWS") is a corporation organized and existing under the laws of the state of Delaware with a principal place of business at 410 Terry Ave N, Seattle, Washington 98109-5210.

10. AWS is a subsidiary and controlled affiliate of defendant Amazon.com, Inc. and a so-called Amazon Group Company.

11. On information and belief, AWS may be served with process through its registered agent, Corporation Service Company, 100 Shockoe Slip, Floor 2, Richmond, Virginia, 23219-4100, or anywhere it may be found.

12. AWS does business across the United States, including in the Commonwealth of Virginia and, more specifically, in the Eastern District of Virginia.

13. On information and belief, AWS has been authorized to transact business in the Commonwealth of Virginia and the Eastern District of Virginia since on or about January 25, 2013, under Virginia Entity ID F1918947.

14. On information and belief, Defendants sell and offer 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.

15. On information and belief, Amazon 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) Amazon Echo Products (e.g., Amazon Echo 1st Generation, Amazon Echo 2nd Generation, Amazon Echo 3rd Generation, Amazon Echo Dot 1st Generation, Amazon Echo Dot 2nd Generation, Amazon Echo Dot 3rd Generation, Amazon Echo Dot Kids Edition 1st Generation, Amazon Echo Dot Kids Edition 2nd Generation, Amazon Echo Look, Amazon Echo Show 2nd Generation, Amazon Echo Spot, Amazon Echo Plus 1st Generation, Amazon Echo Plus 2nd Generation, Amazon Echo Studio, Amazon Echo (4th Generation), Amazon Echo Dot (4th Generation), Amazon Echo Dot With Clock (3rd Generation), Amazon Echo Dot With Clock (4th Generation), Amazon Echo Dot Kids (3rd Generation), Amazon Echo

Dot Kids (4th Generation), Amazon Echo Hub (all generations), Amazon Echo Show 5 (all generations), Amazon Echo Show 8 (all generations), Amazon Echo Show 10 (all generations), Amazon Echo Show 15 (all generations), Amazon Echo Show 15 10 (3rd generation) (collectively "Amazon Echo Products"); (2) Amazon Kindle and Amazon Fire Products (e.g., Amazon Kindle Fire (2nd Generation), Kindle Fire (2.5th Generation), Kindle Fire (3rd Generation), Fire HD (4th Generation), Fire/Fire HD (5th Generation), Fire HD (6th Generation), Fire/Fire HD (7th Generation), Fire HD (8th Generation), Fire/Fire HD (9th Generation), Fire HD (10th Generation), Fire HD 10 (11th Generation), Fire 7 (12th Generation), Fire HD 8 (12th Generation), Fire HD 10 (13th Generation), Fire Max 11 (13th Generation) (Collectively "Amazon Tablet Products" or "Fire Tablet Devices"); (3) Amazon Fire TV and Amazon Fire TV Cube (2nd Generation) Products; (4) Alexa Built-In Products; (5) 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; (6) combinations of products and/or services comprising, in whole or in part, two or more of the foregoing products and services; and, (7) all other current or legacy products and services imported, made, used, sold, or offered for sale by Amazon 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 Amazon Products and Services").

16. On information and belief, Amazon, as well as the hardware and software components comprising the Amazon Products and Services and/or that enable the Amazon 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

17. 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).

18. This Court has general and specific personal jurisdiction over the Defendants 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 Amazon Products and Services provided to individuals and businesses in the Eastern District of Virginia.

19. On information and belief, Amazon infringes the patent-in-suit in the Eastern District of Virginia, at least, by making, using, offering to sell access to, and/or selling access to the accused Amazon Products and Services in this district.

20. Amazon is the world's largest online retailer and marketplace and provider of cloud computing services through AWS. Amazon distributes a variety of downloadable and streaming content through its Amazon Prime Video, Amazon Music, and Audible units. Amazon also produces retail consumer electronics including the Amazon Echo Products and the Kindle e-reader.

21. On information and belief, Amazon is the second largest private employer in the United States. According to the Virginia Economic Development Partnership, Amazon has since 2010 invested more than $109 billion in Virginia, including infrastructure and compensation to employees, and has created more than 36,000 jobs in the Commonwealth.[1]

22. Amazon officially opened its "HQ2"—i.e. its second headquarters—in Arlington, Virginia and plans to add more than 25,000 new jobs to the more than 30,000 employees it already has in the Virginia and DC metro area.[2] Amazon's new headquarters are within this judicial district in the National Landing neighborhood of Arlington, Virginia. According to Amazon, the new Arlington campus will feature energy-efficient offices, neighborhood retail, and new public and green spaces including 1.1 acres of new public open space, designed for a variety of uses, including a dog park, recreation areas, farmers markets, and more to help realize the community's vision for a large, centrally-located park. *Id*.

23. On information and belief, certain features of the accused Amazon Products and Services (e.g., Amazon Alexa) are developed at Amazon's HQ2 in the Eastern District of Virginia. *See* https://www.spglobal.com/marketintelligence/en/news-insights/latest-news-headlines/amazon-hiring-for-cloud-services-alexa-products-at-hq2-in-arlington-va-53798578; https://www.linkedin.com/posts/amazon_amazon-alexa-hq2-recruiting-short-1mov-activity-6862406229579456512-8Iu9; https://www.youtube.com/watch?v=vU2szgs2M7c.

24. On information and belief, the accused Amazon Products and Services are made, used, sold and offered for sale by Amazon throughout the Eastern District of Virginia.

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[1] *See* https://www.vedp.org/press-release/2023-09/amazon-virginiabeach.

[2] See https://www.aboutamazon.com/workplace/corporate-offices.

25. On information and belief, Amazon customers located in the Eastern District of Virginia have obtained access to and used the accused Amazon Products and Services while located in the Eastern District of Virginia.

26. This Court has personal jurisdiction over Amazon because, inter alia, Amazon, on information and belief: (1) has committed acts of patent infringement in this Eastern District of Virginia; (2) maintains a regular and established place of business, namely its HQ2 in Arlington, within the Eastern District of Virginia; (3) has substantial, continuous, and systematic contacts with this Commonwealth and the Eastern District of Virginia; (4) owns, manages, and operates facilities in this Commonwealth and the Eastern District of Virginia; (5) enjoys substantial income from its operations and sales in this Commonwealth and the Eastern District of Virginia; (6) employs Virginia residents in this Commonwealth and the Eastern District of Virginia, and (7) solicits business using the Amazon Products and Services in this Commonwealth and the Eastern District of Virginia.

27. On April 9, 2020, this Court held,

> It must be said that Amazon is nothing if not ubiquitous in the United States. Furthermore, after considering 238 cities, Amazon chose Arlington in the Eastern District of Virginia as the location for its HQ2 and will invest $2.5 billion and 25,000 jobs in the undertaking. As such, Amazon cannot in good faith represent to the Court that E.D. Va. is an undesirable or inconvenient location to operate and do business. Litigating should not be an additional significant strain.

Maglula, Ltd. v. Amazon.com, Inc., No. 1:19-cv-01570, ECF No. 52 at 32-33 (E.D. Va. Apr. 9, 2020).

28. Venue is proper pursuant to 28 U.S.C. §§ 1391 and/or 1400(b), at least because Amazon has committed acts of infringement in this judicial district, and Amazon has regular and established places of business in this judicial district. Venue is also proper for the reasons set forth by this Court in its *Maglula* decision. *See* 1:19-cv-01570 (E.D. Va. Apr. 9, 2020), D.I. 52.

29. In fact, Amazon has already admitted that venue is proper in this District. In *Amazon.com, Inc. v. WDC Holdings LLC*, No. 1:20-cv-484, ECF No. 1, ¶ 26 (E.D. Va. Apr. 27, 2020), Amazon argued that venue in this district was proper because "it is a district in which Plaintiff [Amazon] maintains headquarters and/or substantial business operations…"

THE ASSERTED PATENTS

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

30. 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.

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

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

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

34. The '337 patent 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.

35. 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.

36. The 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

37. 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.

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

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

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

41. 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.

42. 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.

43. 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

44. 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.

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

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

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

48. 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.

49. 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.

50. 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

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

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

53. 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.

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

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

56. 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.

57. 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

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

59. On information and belief, Defendants (or those acting on their behalf) make, use, sell, sell access to, import, offer to sell and/or offer to sell access to the Amazon 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.

60. On information and belief, one or more components of the Amazon Products and Services is, employs, or provides a voice-content control method (*e.g.*, a method for receiving and processing voice sound signals). On information and belief and as an example, one or more components of the Amazon Products and Services receive voice inputs through a microphone, is connected to Alexa Voice Service (AVS), and receives information from AVS that relays to the user via its speaker. *See* https://www.ifixit.com/Teardown/Amazon+Echo+Teardown/33953; https://developer.amazon.com/en-US/alexa/devices/alexa-built-in.

61. On information and belief, one or more components of the Amazon Products and Services is, employs, or provides a method voice-content control method comprising calculating a distance (*e.g.*, using ultrasound motion detection, adaptive content, and/or an algorithm for detecting the location of the voice audio source (*e.g.*, "SIR beam selection")) between a user (*e.g.*, a person within range of an Echo device) and a content control device (*e.g.*, an Echo device). On information and belief and as an example, one or more components of the Amazon Products and Services use "adaptive content" to "detect the proximity of a person." *See* https://www.amazon.com/gp/help/customer/display.html?nodeId=TBmEUlW1U7xwcgPvdl. On information and belief, the adaptive content feature involves calculating a distance between a user and the Echo device. Further, on information and belief and as another example, one or more components of the Amazon Products and Services use "ultrasound motion detection" to "detect motion in a room." *See* https://www.amazon.com/gp/help/customer/display.html?nodeId=GSR22RYDWS3KBUYW; https://www.amazon.in/b?ie=UTF8&node=28071100031. On information and belief, the ultrasound motion detection feature involves calculating a distance between a user and the Echo device. Further, on information and belief and as another example, Amazon Products and

Services use a "signal-to-interference ratio beam selector" ("SIR Beam Selector") algorithm to "learn" and "predict" the "locations of audio sources." *See* https://assets.amazon.science/da/c2/71f5f9fa49f585a4616e49d52749/sir-beam-selector-for-amazon-echo-devices-audio-front-end.pdf at 2. On information and belief, the SIR beam selection feature involves calculating a distance between a user and the Echo device.

62. On information and belief, one or more components of the Amazon 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, one or more components of the Amazon Products and Services use microphones to acquire voice sounds. *See* https://www.ifixit.com/Teardown/Amazon+Echo+Teardown/33953; https://electronics360.globalspec.com/article/8839/teardown-amazon-echo; https://mm.digikey.com/Volume0/opasdata/d220001/medias/docus/761/SPV08A0LR5H-1_DS.pdf. On information and belief, these microphones are omnidirectional and include an acoustic sensor, a low noise input buffer, and an output amplifier. *See* https://www.ifixit.com/Teardown/Amazon+Echo+Teardown/33953. On information and belief and as an example, one or more components of the Amazon Products and Services also use additional hardware components (e.g., a TLV320ADC3101 microcontroller) to acquire voice sounds. *See* https://www.ti.com/product/TLV320ADC3101. On information and belief and as an example, one or more components of the Amazon Products and Services also use additional software components (e.g., software associated with Alexa and/or Alexa Voice Service) to acquire voice sounds. *See* https://developer.amazon.com/en-US/alexa; https://developer.amazon.com/ja-JP/docs/alexa/avs-device-sdk/overview.html.

63. On information and belief, one or more components of the Amazon 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 components of the Amazon Products and Services use Amazon Alexa to classify voices based on a voice profile that generates a VoiceID associated with individual users. *See* https://www.amazon.com/gp/help/customer/display.html?nodeId=GYCXKY2AB2QWZT2X. On information and belief, the voice profiles ensure personalised results such as a user's playlist, calendar, etc. when the user's voice is detected. *See id.* Further, on information and belief and as another example, one or more components of the Amazon Products and Services classify a voice signal as a first voice (near) or a second voice (far) using, *e.g.*, the adaptive content feature or the SIR beam selection feature. *See* https://assets.amazon.science/da/c2/71f5f9fa49f585a4616e49d52749/sir-beam-selector-for-amazon-echo-devices-audio-front-end.pdf. On information and belief, the Amazon Products and Services 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). In another example, on information and belief, based on the distance calculated using the SIR beam selection feature (e.g., in determining the location of the voice source and the amount of interference and noise acquired), the Amazon Products and Services determine that the acquired voice sound is originating from a user that is near or far from device. As such, on information

and belief, the Amazon Products and Services 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). On information and belief, in any one of the examples above, the classification of the acquired voice signal as a first voice or a second voice is based on the distance between the user and the voice-content control device using, e.g., ultrasound motion detection, adaptive content, and/or SIR beam selection.

64. On information and belief, one or more components of the Amazon 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 components of the Amazon Products and Services use on-board processing (e.g., a process executing unit) to analyze the speech input provided by the user. *See* https://www.amazon.science/blog/on-device-speech-processing-makes-alexa-faster-lower-bandwidth; https://www.amazon.in/b?ie=UTF8&node=28071107031; https://assets.amazon.science/24/c2/e90a7a64473cb630814bb369f181/query-rewriting-using-markov-chain-collaborative-filtering.pdf. On information and belief, the on-board processor converts the user's speech input into text and the text is sent to Amazon cloud for further processing. *See id.*

65. On information and belief, one or more components of the Amazon 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 Echo device in response to the user voice signal acquired by Echo device) that is a text data for a voice to be output to the user. On information and belief and as an example, one or more components

of the Amazon Products and Services after analyzing the user's voice input by the on-board processor and the Amazon cloud, the Amazon Echo Products 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 Echo device. *See* https://assets.amazon.science/24/c2/e90a7a64473cb630814bb369f181/query-rewriting-using-markov-chain-collaborative-filtering.pdf; https://www.youtube.com/watch?v=U1yT_4xcglY&t=220s.

66. On information and belief, one or more components of the Amazon Products and Services is, employs, or provides a voice-content control method comprising adjusting (*e.g.*, using Adaptive Volume) a sound volume of voice data obtained by converting the output sentence thereinto. On information and belief and as an example, one or more components of the Amazon Products and Services use an Adaptive Volume feature that allows the automatic adjustment of volume of Alexa's voice response according to the ambient noise. *See* https://www.lifewire.com/what-is-adaptive-volume-on-alexa-5205636; https://www.cnet.com/home/smart-home/how-to-use-alexa-adaptive-volume-on-your-amazon-echo/.

67. On information and belief, one or more of the Amazon 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 Echo device in response to the user voice signal acquired by the Echo 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 Echo device in response to the user voice signal acquired by Echo 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 components of the Amazon Products and Services 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. *See* https://www.amazon.in/gp/help/customer/display.html?nodeId=GYCXKY2AB2QWZT2X; https://www.amazon.com/gp/help/customer/display.html?nodeId=TBmEUlW1U7xwcgPvdl. On information and belief, Amazon Alexa generates personalized voice and/or visual responses using Voice ID and Alexa (using Voice ID) recognizes a user by their voice and provides them with personalized results (e.g., their calendar schedule, music playlist etc.). *See id.* On information and belief and as another example, one or more components of the Amazon Products and Services display more or less information depending on whether an acquired voice has been classified as one that corresponds to a nearby/close user or a far/distant user (e.g., using Adaptive Content). On information and belief, the Amazon Products and Services can also provide a voice response with more or less information consistent with the more or less information that is visually displayed. *See* https://www.amazon.com/gp/help/customer/display.html?nodeId=TBmEUlW1U7xwcgPvdl.

68. On information and belief, one or more components of the Amazon Products and Services 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, or is output in a regular voice or a whisper voice) from the sound volume of voice data obtained by converting the second output sentence thereinto. On

information and belief and as an example, one or more components of the Amazon Products and Services (using Adaptive Volume) automatically adjust the volume of Alexa's voice response. *See* https://www.lifewire.com/what-is-adaptive-volume-on-alexa-5205636. On information and belief, if the acquired voice signal includes significant sound interference signals, the Amazon 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.* On information and belief and as another example, one or more components of the Amazon Products and Services, if the acquired voice signal is detected as a whisper compared to a normal voice, can adjust the volume/voice of its response to also be a whisper compared to the volume/voice of its response if a normal voice signal were detected. *See* https://www.amazon.science/blog/whisper-to-alexa-and-shell-whisper-back; https://www.cnet.com/home/smart-home/how-to-use-alexa-adaptive-volume-on-your-amazon-echo/.

69. On information and belief, Defendants 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 Amazon Products and Services.

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

COUNT II - Infringement of the '675 patent

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

72. On information and belief, Defendants (or those acting on their behalf) make, use, sell, sell access to, import, offer to sell and/or offer to sell access to the Amazon 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.

73. On information and belief, one or more components of the Amazon Products and Services is, employs, or provides an output-content control method (*e.g.*, a method for receiving and processing voice sound signals). On information and belief and as an example, one or more components of the Amazon Products and Services receive voice inputs through a microphone, is connected to Alexa Voice Service (AVS), and receives information from AVS that relays to the user via its speaker. *See* https://www.ifixit.com/Teardown/Amazon+Echo+Teardown/33953; https://developer.amazon.com/en-US/alexa/devices/alexa-built-in.

74. On information and belief, one or more components of the Amazon 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, one or more components of the Amazon Products and Services use microphones to acquire voice sounds. *See* https://www.ifixit.com/Teardown/Amazon+Echo+Teardown/33953; https://electronics360.globalspec.com/article/8839/teardown-amazon-echo; https://mm.digikey.com/Volume0/opasdata/d220001/medias/docus/761/SPV08A0LR5H-1_DS.pdf. On information and belief, these microphones are omnidirectional and include an acoustic sensor, a low noise input buffer, and an output amplifier. *See* https://www.ifixit.com/Teardown/Amazon+Echo+Teardown/33953. On information and belief and as an example, one or more components of the Amazon Products and Services also use additional hardware components (e.g., a TLV320ADC3101 microcontroller) to acquire voice sounds. *See* https://www.ti.com/product/TLV320ADC3101. On information and belief and as an

example, one or more components of the Amazon Products and Services also use additional software components (e.g., software associated with Alexa and/or Alexa Voice Service) to acquire voice sounds. *See* https://developer.amazon.com/en-US/alexa; https://developer.amazon.com/ja-JP/docs/alexa/avs-device-sdk/overview.html.

75. On information and belief, one or more components of the Amazon Products and Services is, employs, or provides an output-content control method comprising calculating a distance (*e.g.*, using ultrasound motion detection, adaptive content, and/or an algorithm for detecting the location of the voice audio source (*e.g.*, "SIR beam selection")) between the user (*e.g.*, a person within range of an Echo device) and an output-content control device (*e.g.*, an Echo device) by a proximity sensor (*e.g.*, hardware/software associated with ultrasound motion detection, adaptive content, and/or an algorithm for detecting the location of voice audio sources) to classify the voice (*e.g.*, the signal representing the voice sound) into either a first voice (*e.g.*, the voice of a particular first person, or a near/close voice) or a second voice (*e.g.*, the voice of a particular second person, or a far/distant voice) based on the calculated distance. On information and belief and as an example, one or more of the Amazon Products and Services use "adaptive content" to "detect the proximity of a person." *See* https://www.amazon.com/gp/help/customer/display.html?nodeId=TBmEUlW1U7xwcgPvdl. On information and belief, the adaptive content feature involves calculating a distance between a user and the Echo device. *See id*. Further, on information and belief and as another example, one or more components of the Amazon Products and Services use "ultrasound motion detection" to "detect motion in a room." *See* https://www.amazon.com/gp/help/customer/display.html?nodeId=GSR22RYDWS3KBUYW; https://www.amazon.in/b?ie=UTF8&node=28071100031. On information and belief, the

ultrasound motion detection feature involves calculating a distance between a user and the Echo device. Further on information and belief and as another example, Amazon Products and Services use a "signal-to-interference ratio beam selector" ("SIR Beam Selector") algorithm to "learn" and "predict" the "locations of audio sources." *See* https://assets.amazon.science/da/c2/71f5f9fa49f585a4616e49d52749/sir-beam-selector-for-amazon-echo-devices-audio-front-end.pdf at 2. On information and belief, the SIR beam selection feature involves calculating a distance between a user and the Echo device. Further, on information and belief, Amazon Products and Services analyze an acquired voice signal and classify it as a first voice or second voice; as an example, Echo Products (using Amazon Alexa) are capable of classifying voices based on a voice profile that generates a Voice ID associated with individual users and ensures personalized results when the user's voice is detected. *See* https://www.amazon.com/gp/help/customer/display.html?nodeId=GYCXKY2AB2QWZT2X.

76. On information and belief, one or more components of the Amazon 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 and as an example, one or more components of the Amazon Products and Services use on-board processing to analyze the speech input provided by the user. *See* https://www.amazon.science/blog/on-device-speech-processing-makes-alexa-faster-lower-bandwidth; https://www.amazon.in/b?ie=UTF8&node=28071107031; https://assets.amazon.science/24/c2/e90a7a64473cb630814bb369f181/query-rewriting-using-

markov-chain-collaborative-filtering.pdf. Further, on information and belief and as an example, the on-board processor converts the user's speech input into text and the text is sent to Amazon cloud for further processing. *See id*. On information and belief and as an example, one or more components of the Amazon Products and Services, Amazon Alexa's spoken language understanding system utilizes Automatic Speech Recognition (ASR) and Natural Language Understanding (NLU) units to recognize and understand speech. On information and belief, the ASR recognizes the user's speech and converts it into text while the NLU unit interprets the context of the user's requested intent to provide the relevant results. *See* https://www.youtube.com/watch?v=U1yT_4xcglY&t=220s; https://www.aboutamazon.com/news/devices/how-our-scientists-are-making-alexa-smarter; https://www.youtube.com/watch?v=U1yT_4xcglY&t=707s; https://developer.amazon.com/en-US/docs/alexa/custom-skills/calendar-intents.html.

77. On information and belief, one or more components of the Amazon 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 Echo device in response to the user voice signal acquired by Echo 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 components of the Amazon Products and Services, after analyzing the user's voice input by the on-board processor and the Amazon cloud, use Amazon Alexa to obtain the relevant output for the user's request, which is output content information that is provided to the user via a display or text-to-speech process which consequently notifies the user about the information. *See* https://assets.amazon.science/24/c2/e90a7a64473cb630814bb369f181/query-rewriting-using-

markov-chain-collaborative-filtering.pdf;

https://www.youtube.com/watch?v=U1yT_4xcglY&t=220s;

https://www.amazon.in/gp/help/customer/display.html?nodeId=G66R7GDSL86KNFUN;

https://developer.amazon.com/en-US/docs/alexa/custom-skills/calendar-intents.html.

78. On information and belief, one or more components of the Amazon 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 Echo device in response to the user voice signal acquired by Echo device) in which at least one word selected among words included in the content information of the notification information is replaced with another work (*e.g.*, filtering/customizing content information based on a particular user and/or the proximity of that user to the Echo device). On information and belief and as an example, one or more components of the Amazon Products and Services 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. *See* https://www.amazon.in/gp/help/customer/display.html?nodeId=GYCXKY2AB2QWZT2X. On information and belief and as an example, Amazon Alexa generates personalized voice and/or visual responses using Voice ID, and recognizes a user by their voice to provide them with personalized results (e.g., their calendar schedule, music playlist, etc.). *See id*; *see also* https://www.amazon.com/gp/help/customer/display.html?nodeId=GYCXKY2AB2QWZT2X; https://developer.amazon.com/en-US/docs/alexa/custom-skills/calendar-intents.html; https://www.amazon.com/gp/help/customer/display.html?nodeId=G3AJT9URG45M44HB. Further, on information and belief and as an example, Amazon Products and Services can display more or less information depending on whether an acquired voice has been classified as one that

corresponds to a nearby/close user or a far/distant user (e.g., using Adaptive Content). On information and belief, the Amazon Products and Services can also provide a voice response with more or less information consistent with the more or less information that is visually displayed. *See* https://www.amazon.com/gp/help/customer/display.html?nodeId=TBmEUlW1U7xwcgPvdl.

79. On information and belief, one or more components of the Amazon 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 Echo device in response to the user voice signal acquired by Echo 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 Echo device). On information and belief and as an example, Amazon Products and Services, in determining a user's status and/or proximity to the Echo device, can cause more/additional content information to be displayed and/or audibly transmitted. *See id*.; *see also* https://www.amazon.com/gp/help/customer/display.html?nodeId=GYCXKY2AB2QWZT2X; https://developer.amazon.com/en-US/docs/alexa/custom-skills/calendar-intents.html; https://www.amazon.com/gp/help/customer/display.html?nodeId=G3AJT9URG45M44HB; https://www.amazon.com/gp/help/customer/display.html?nodeId=TBmEUlW1U7xwcgPvdl.

80. On information and belief, Defendants 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 Amazon Products and Services.

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

COUNT III - Infringement of the ’487 patent

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

83. On information and belief, Defendants (or those acting on their behalf) make, use, sell, sell access to, import, offer to sell and/or offer to sell access to the Amazon 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.

84. On information and belief, one or more components of the Amazon Products and Services is, employs, or provides a method of controlling an electronic apparatus (*e.g.*, an Amazon Product), comprising several method steps. On information and belief and as an example, Amazon Products and Services perform a variety of display functions on a screen of the device. *See* https://www.amazon.com/b/?ie=UTF8&node=9818047011&tag=googhydr-20&hvadid=453973924207&hvpos=&hvnetw=g&hvrand=18095407401951544&hvpone=&hvptwo=&hvqmt=p&hvdev=c&hvdvcmdl=&hvlocint=&hvlocphy=9053018&hvtargid=kwd-296991474210&ref=pd_sl_1kh9ribjzp_p&gclid=EAIaIQobChMI79mV9LuYhwMVo15HAR0EyQtOEAMYASAAEgIyA_D_BwE.

85. On information and belief, one or more components of the Amazon 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, Amazon Products and Services include a digital screen for displaying images, information (including but not limited to time, temperature, weather forecast, calendar events), and icons for controlling the Amazon Products and Services and other linked products (including but not limited to accessing

software applications), through the Amazon Product devices. *See* https://www.amazon.com/echo-show-10/dp/B07VHZ41L8.

86. On information and belief, one or more components of the Amazon 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, Amazon Products and Services include a touchscreen that enables the device to detect when a user touches the touchscreen. *See* https://www.amazon.com/b?ie=UTF8&node=21213730011; https://www.amazon.com/b/ref=ods_afe_htsm_htsmt?node=21341318011. Further, on information and belief and as an example, Amazon Products and Services also acquire the positions of the user's touch(es) relative to the display/interface that indicates information and objects. *See id*; *see also* https://www.amazon.com/b/ref=ods_afe_htsmt_htsm?node=21213730011 (stating "[t]o change the zoom level, pinch inward or outward with two fingers when the screen is magnified.").

87. On information and belief, one or more components of the Amazon 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 those places). On information and belief and as an example, Amazon Products and Services are capable of certain functionalities, but only when

two touch positions are detected and acquired. *See* https://www.amazon.com/b?ie=UTF8&node=21213730011; https://www.amazon.com/b/ref=ods_afe_htsm_htsmt?node=21341318011. On information and belief and as a further example, Amazon Products and Services must first decide whether or not first and second touch positions are acquired in order to perform functionalities such as "pan" or "zoom." *See id*. (explaining "[t]o pan to a part of the screen, drag two fingers across the screen … [h]old your fingers slightly apart while panning," and "[t]o change the zoom level, pinch inward or outward with two fingers when the screen is magnified.").

88. On information and belief, one or more components of the Amazon 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, Amazon Products and Services are capable of certain functionalities, but only when two touch positions are detected and acquired. *See* https://www.amazon.com/b?ie=UTF8&node=21213730011; https://www.amazon.com/b/ref=ods_afe_htsm_htsmt?node=21341318011. On information and belief and as a further example, Amazon Products and Services must first decide whether or not first and second touch positions are acquired in order to perform functionalities such as "pan" or "zoom." *See id*. (explaining "[t]o pan to a part of the screen, drag two fingers across the screen … [h]old your fingers slightly apart while panning," and "[t]o change the zoom level, pinch inward or outward with two fingers when the screen is magnified.").

89. On information and belief, one or more components of the Amazon 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, Amazon 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.amazon.com/b?ie=UTF8&node=21213730011; https://www.amazon.com/b/ref=ods_afe_htsm_htsmt?node=21341318011. As a further example, on information and belief, Amazon 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*.

90. On information and belief, one or more components of the Amazon 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, Amazon 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.amazon.com/b?ie=UTF8&node=21213730011; https://www.amazon.com/b/ref=ods_afe_htsm_htsmt?node=21341318011. On information and belief and as further example, Amazon 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*.

91. On information and belief, one or more components of the Amazon 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, Amazon 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.amazon.com/b/ref=ods_afe_htsmt_htsm?node=21213730011. On information and belief, Amazon Products and Services detect two touch positions that are two opposite corners of a rectangular area. *See id*.

92. On information and belief, one or more components of the Amazon 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, Amazon 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.amazon.com/b?ie=UTF8&node=21213730011; https://www.amazon.com/b/ref=ods_afe_htsm_htsmt?node=21341318011. On information and belief, Amazon 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*.

93. On information and belief, one or more components of the Amazon 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, Amazon 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.amazon.com/b?ie=UTF8&node=21213730011; https://www.amazon.com/b/ref=ods_afe_htsm_htsmt?node=21341318011. On information and belief, Amazon 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*. (explaining "[t]o change the zoom level, pinch inward or outward with two fingers when the screen is magnified.").

94. On information and belief, Defendants 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 Amazon Products and Services.

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

JURY DEMANDED

96. 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 Amazon as follows:

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

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

c. finding that Amazon 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

Ronald M. Daignault (*pro hac vice to be filed*)*
Chandran B. Iyer (VA Bar No. 94100)
Kevin H. Sprenger (VA Bar No. 98588)
rdaignault@daignaultiyer.com
cbiyer@daignaultiyer.com
ksprenger@daignaultiyer.com
DAIGNAULT IYER LLP
8229 Boone Boulevard
Suite 450
Vienna, VA 22182
(202) 330-1666

Attorneys for SoundClear Technologies LLC

**Not admitted to practice in Virginia*