

**IN THE UNITED STATES DISTRICT COURT  
FOR THE EASTERN DISTRICT OF TEXAS  
MARSHALL DIVISION**

STATON TECHIYA, LLC and SYNERGY  
IP CORPORATION,

Plaintiffs,

v.

SAMSUNG ELECTRONICS CO., LTD. and  
SAMSUNG ELECTRONICS AMERICA,  
INC.,

Defendants.

Civil Action No. 2:22-cv-53  
JURY TRIAL DEMANDED

**COMPLAINT FOR PATENT INFRINGEMENT**

1. Staton Techiya, LLC (“Techiya”) and Synergy IP Corporation (“Synergy”) (Techiya and Synergy collectively “Plaintiffs”) bring this action for patent infringement under 35 U.S.C. § 271 against Defendants Samsung Electronics Co., Ltd., and Samsung Electronics America, Inc., (collectively, “Samsung” or “Defendants”) and allege as follows:

**THE PARTIES**

2. Plaintiff Staton Techiya LLC is a Delaware limited liability company having a place of business at 9501 Jagged Creek Ct., Delray Beach, FL, 33446. It was founded in June 2017.

3. Plaintiff Synergy IP is a corporation of the Republic of Korea having a principal place of business at 5th floor, 54-1 Maecheon-ro, Seocho-gu, Seoul 06770, Republic of Korea. It was formed on June 30, 2020.

4. Defendant Samsung Electronics Co., Ltd. (“SEC”) is a Korean corporation having a principal place of business at 129, Samsung-Ro, Yeongtong-Gu, Suwon-si, Gyeonggi-do, 16677, Republic of Korea.

5. Defendant Samsung Electronics America, Inc. (“SEA”) is a New York corporation having a principal place of business at 85 Challenger Road, Ridgefield Park, New Jersey 07660.

6. On information and belief, SEA is a wholly owned subsidiary of SEC.

### **THE ASSERTED PATENTS**

7. United States Patent No. 11,244,666 (“the ‘666 Patent”), entitled “Method and Device for Acute Sound Detection and Reproduction,” issued on February 8, 2022, to inventors Steven Wayne Goldstein, John Usher, and Marc Andrew Boillot. The ‘666 Patent issued from U.S. Patent App. Ser. No. 16/987,396 filed on August 7, 2020, and was previously published as U.S. Patent Pub. No. 2020/0365132 on November 19, 2020. A true and correct copy of the ‘666 Patent is attached as Exhibit A.

8. United States Patent No. 11,217,237 (“the ‘237 Patent”), entitled “Method and Device for Voice Operated Control,” issued on January 4, 2022, to inventors John Usher, Steven Wayne Goldstein, and Marc Andre Boillot. The ‘237 Patent issued from U.S. Patent App. Ser. No. 16/188,683, filed on November 13, 2018, and was previously published as U.S. Patent Pub. No. 2020/0152185 on May 14, 2020. A true and correct copy of the ‘237 Patent is attached as Exhibit B.

9. United States Patent No. 11,057,701 (“the ‘701 Patent”), entitled “Method and Device for In Ear Canal Echo Suppression,” issued on July 6, 2021, to inventors Steven Wayne Goldstein, Marc Andre Boillot, John Usher, and Jason McIntosh. The ‘701 Patent issued from U.S. Patent App. Ser. No. 16/247,186, filed on January 14, 2019, and was previously published as

U.S. Patent Pub. No. 2019/0149915 on May 16, 2019. A true and correct copy of the ‘701 Patent is attached as Exhibit C.

10. United States Patent No. 11,039,259 (“the ‘259 Patent”), entitled “Method and System for Sound Monitoring Over a Network,” issued on June 15, 2021, to inventors Steven Wayne Goldstein, Marc Andre Boillot, Jason McIntosh, and John P. Keady. The ‘259 Patent issued from U.S. Patent App. Ser. No. 16/571,973, filed on September 16, 2019, and was previously published as U.S. Patent Pub. No. 2020/0015025 on January 9, 2020. A true and correct copy of the ‘259 Patent is attached as Exhibit D.

11. By way of assignment, Techiya is the owner of the ‘666 Patent, the ‘237 Patent, the ‘701 Patent, and the ‘259 Patent (collectively, the “Asserted Patents”). Synergy is the exclusive licensee of the Asserted Patents with the right to sublicense the Asserted Patents.

12. Plaintiffs possess full and complete rights to sue under the Asserted Patents, including the right to sue for past, present, and future damages and injunctive relief.

13. The Asserted Patents are each valid and enforceable.

14. Plaintiffs and prior owners of the Asserted Patents themselves or through licensees have not sold products within the scope of any claim of the Asserted Patents and, therefore, are in compliance with 35 U.S.C. §287.

### **JURISDICTION AND VENUE**

15. This action arises under the Patent Act, 35 U.S.C. § 1 et seq.

16. Subject matter jurisdiction is proper in this Court under 28 U.S.C. §§ 1331 and 1338(a).

17. Venue in this District is proper under 28 U.S.C. § 1391(c)(1)-(3) and 28 U.S.C. §1400(b). SEC is not a resident of the United States and may be sued in this District, as suits

against foreign entities are proper in any judicial district where they are subject to personal jurisdiction. SEA has a regular and established place of business in this District, at 6625 Excellence Way, Plano, TX, and at 1100 Klein Road, Plano, TX. On information and belief, SEA employs full-term personnel such as sales personnel and engineers in this District. Further, SEA is registered to conduct business in the State of Texas and has a Texas Taxpayer Number of 11329511536. SEC and SEA all have conducted and continue to conduct business in this District, and all have committed and continue to commit acts of patent infringement in this District.

18. This Court has personal jurisdiction over Samsung. Samsung has conducted and continues to conduct business within this District. Samsung, directly or through subsidiaries or intermediaries (including distributors, retailers, and others), ships, distributes, makes, uses, offers for sale, sells, imports, and/or advertises (including by providing interactive web pages) its products and/or services in the United States and this District and/or contributes to and actively induces its customers to ship, distribute, make, use, offer for sale, sell, import, and/or advertise (including the provision of interactive web pages) infringing products and/or services in the United States and this District.

19. Samsung, directly and through subsidiaries or intermediaries (including distributors, retailers, and others), has purposefully and voluntarily placed one or more of its infringing products and/or services, as described below, into the stream of commerce with the expectation that those products will be purchased and used by customers and/or consumers in this District. These infringing products and/or services have been and continue to be made, used, sold, offered for sale, purchased, and/or imported by customers and/or consumers in this District.

20. On information and belief, Samsung has also placed the Samsung Galaxy S21 5G and other similar smartphones, the Samsung Galaxy Buds, Buds Pro, Buds Live, Buds+, Buds2,

and other similar earphones, the Samsung Wearable app, and the Bixby Personal Assistant app (the “Accused Products”) into the stream of commerce by shipping the Accused Products into this District and shipping the Accused Products into the United States knowing that those products would be shipped into this District.

### **JOINDER**

21. Joinder of Defendants is proper under 35 U.S.C. § 299. The allegations of patent infringement contained herein arise out of the same series of transactions or occurrences relating to the importing (or having imported) into the United States and/or making (or having made), using (or inducing the use of), selling, or offering for sale within the United States, the same Accused Products. Nonlimiting examples of these products imported, sold, offered for sale, and/or used in this District include, but are not limited to, the Samsung Galaxy Buds, Buds Pro, Buds Live, Buds+, Buds2, and Samsung Galaxy S21 5G.

### **ALLEGATIONS OF PATENT INFRINGEMENT**

22. Plaintiffs incorporate the allegations of the foregoing paragraphs as if fully restated herein.

23. As set forth below, the Accused Products incorporate, without any license or permission from Plaintiffs, technology protected by the Asserted Patents. Plaintiffs respectfully seek relief from this Court for Defendants’ infringement.

24. Samsung has and continues to make, have made, use, sell, offer for sale, import, have imported, test, design, and/or market in the United States smartphones and earphones that infringe the Asserted Patents.

25. Samsung has directly infringed, and continues to directly infringe, the Asserted Patents under 35 U.S.C. § 271(a) and (g) by making, using, selling and/or offering to sell, in this

District and elsewhere in the United States, and/or importing into this District and elsewhere in the United States Accused Products that infringe the Asserted Patents, as further described in detail in Counts I-IV, *infra*.

26. Using the Samsung Galaxy Buds Pro as a representative product evidencing Samsung's infringement, the Samsung Galaxy Buds Pro has an inner microphone and an outer microphone. On information and belief, the Samsung Galaxy Buds Pro includes a Broadcom BCM43015 chipset which includes a digital signal processor and memory and uses the RTOS operating system. The Samsung Galaxy Buds Pro includes a 2 way speaker, and has a high SNR microphone as the main microphone and has an inner microphone.

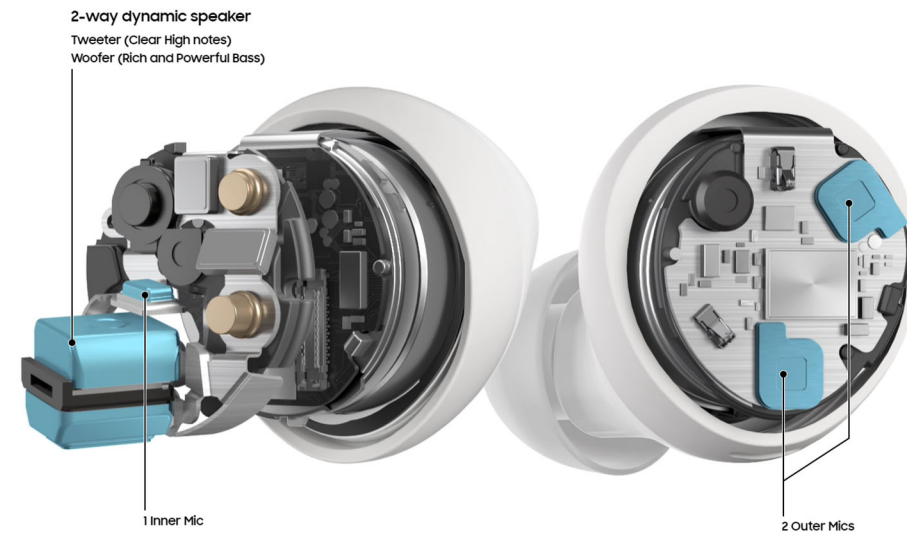


Source: <https://www.samsung.com/global/galaxy/galaxy-buds-pro/specs/>;

<https://www.samsung.com/global/galaxy/galaxy-buds-pro/#buds-pro>

27. On information and belief, the same or similar processors and operating system are present in the Samsung Galaxy Buds2, Samsung Galaxy Buds Live, and other Samsung Galaxy earphones.

28. The Samsung Galaxy Buds+ (<https://www.samsung.com/global/galaxy/galaxy-buds-plus/>) is a further representative product evidencing Samsung's infringement. The Samsung Galaxy Buds+ includes an ear canal (inner) microphone, an ear canal speaker, and two exterior ambient microphones.



29. On information and belief, the Samsung Galaxy Buds+ includes a Broadcom BCM43015 chipset that includes a memory storing instructions for the processor to execute. (<https://www.samsung.com/global/galaxy/galaxy-buds-plus/specs/>)

30. The Samsung Galaxy Buds+ also implements Ambient Sound Mode, which enables the surrounding (ambient) sound to flow into the earbuds and which can also be used during calls so that the user can hear her own voice as well as the other's voice as the outer microphones and the inner microphone are controlled to diminish or block out surrounding sounds during the duration of the call. (<https://www.samsung.com/global/galaxy/galaxy-buds-plus/>). On information and belief, the Samsung Galaxy Buds Pro, Samsung Galaxy Buds Live, Samsung Galaxy Buds2, and other Samsung Galaxy earphones have similar functionality.

31. The Samsung Galaxy S21 5G is an example of infringing Samsung smartphones.

## Galaxy S21 5G



Devices and software are constantly evolving — the illustrations you see here are for reference only.

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32. The Samsung Galaxy S21 5G includes a microphone, processor, and various types of memory.



# Specification

Galaxy S21 5G (Verizon)

<b>Carrier Type</b> ⓘ Verizon		
<b>Color</b> ⓘ Phantom Gray, Phantom Pink, Phantom Violet, Phantom White		
<b>Processor</b>		
<b>CPU Type</b> Octa-Core	<b>CPU Speed</b> 2.84GHz,2.4GHz,1.8GHz	
<b>Display</b>		
<b>Main Display Resolution</b> 2400 x 1080 (FHD+)	<b>Main Display Size</b> ⓘ 158.4mm (6.2" full rectangle) / 154.6mm (6.1" rounded corners)	<b>Main Display Technology</b> Dynamic AMOLED 2X
<b>Color Depth</b> 16M		
<b>Camera</b>		
<b>Camera resolution (Front)</b> 10.0 MP	<b>Camera resolution (Rear)</b> ⓘ 12.0 MP + 64.0 MP + 12.0 MP	<b>Video Recording Resolution</b> UHD 8K (7680 x 4320)@24fps
<b>Main Camera - Flash</b> Yes	<b>Main Camera - Auto Focus</b> Yes	<b>Front Camera - F Number</b> F2.2
<b>Front Camera - Auto Focus</b> Yes	<b>Slow Motion</b> 960fps @HD,240fps @FHD	<b>Main Camera - F Number (Multiple)</b> F1.8 , F2.0 , F2.2
<b>Main Camera - OIS</b> Yes	<b>Main Camera - Zoom</b> Hybrid Optic Zoom at 3x , Digital Zoom up to 30x	
<b>Memory</b>		
<b>Internal Memory</b> ⓘ 128GB, 256GB	<b>Available Memory</b> ⓘ 101.1GB, 218.3GB	<b>RAM_Size (GB)</b> 8GB

<https://www.samsung.com/us/business/support/owners/product/galaxy-s21-5g-verizon/>

33. The Bixby platform is a software application which resides on the Samsung Galaxy S21 G5 smartphone to provide voice assistant functionality. (See, for example, [https://downloadcenter.samsung.com/content/UM/202112/20211229231847590/SAM\\_G991\\_G996\\_G998\\_EN\\_UM\\_OS12\\_121721\\_FINAL.pdf](https://downloadcenter.samsung.com/content/UM/202112/20211229231847590/SAM_G991_G996_G998_EN_UM_OS12_121721_FINAL.pdf))

34. The Bixby platform can be voice-activated by the user speaking a command or phrase such as “Hi, Bixby.” The Bixby server(s) include at least a processor and processor readable memory where a digital vocabulary database of acoustic characteristics, e.g., temporal or spectral patterns, of verbal words which are sufficient to recognize many commands, such as the commands in the examples below:

“Hi Bixby take a selfie with a sticker.”

“Turn on Bluetooth.”

“Set media volume to 5.”

“Find Jane’s number.”

“Start recording in interview mode.”

“Change TV channel to 7.”

Source: <https://www.samsung.com/us/explore/bixby/>

35. One feature of Bixby is the identification of information about a song, e.g., title, artist, or album, by transmitting a portion of the song as captured by the microphone of a Samsung Galaxy S21 5G to the Bixby server. See <https://www.sammobile.com/2019/03/14/bixby-identify-music-shazam>, and <https://www.samsung.com/au/support/mobile-devices/detect-song-titles-using-bixby/>.

36. Following notice of its infringement of the Asserted Patents on February 11, 2022, Samsung has proceeded to directly infringe by making, using, testing, designing, selling, offering to sell, and/or importing in this District and elsewhere in the United States the Bixby platform, smartphones and earphones that infringe the Asserted Patents.

37. Samsung was placed on notice of its infringement of each of the Asserted Patents at least as early as February 11, 2022.

38. Samsung has also indirectly infringed, and continues to indirectly infringe, the Asserted Patents under 35 U.S.C. § 271(b) and (c). Samsung contributes to and induces direct infringement by Samsung's distributors, customers, and end-users. For example, on information and belief, retailers such as the Walmart Supercenter at 1701 E End Blvd N, Marshall, TX 75670 offer Accused Products for sale. Such sale and later use by purchasers results in induced and/or contributory infringement of the Asserted Patents by Samsung.

39. Samsung knew and had specific intent to induce and encourage this direct infringement of the Asserted Patents by Samsung’s customers, including the customers’ importation, sales, use, and offer for sale of articles that are covered by the Asserted Patents.

40. Samsung also contributes to the foregoing infringement by customers by offering to sell, selling, and importing in the United States Samsung products that constitute all or a material part of the articles that practice the Asserted Patents. Samsung knows, or should have known, that such Samsung products have no substantial non-infringing uses, are a material part of the invention of each Asserted Patent, especially made or especially adapted for use in an infringement of such Asserted Patent and is not a staple article or commodity of commerce suitable for substantial non-infringing use.

41. Further, after notice of its infringement of the Asserted Patents, Samsung has proceeded to actively induce infringement of the Asserted Patents under 35 U.S.C. § 271(b) by:

inducing customers and/or other third parties to make, use, sell, offer for sale, market, advertise, and/or import Samsung Galaxy smartphones and Samsung earphones that infringe the Asserted Patents; and

inducing customers and/or other third parties to use Samsung Galaxy smartphones and Samsung earphones that infringe the Asserted Patents in combination with the Bixby platform.

42. Additionally, Samsung has indirectly infringed, and continues to indirectly infringe the Asserted Patents under 35 U.S.C. § 271(c) by materially contributing to infringement of the Asserted Patents by making, using, selling, offering for sale, advertising, marketing, and/or importing smartphones and earphones and Bixby-enabled versions thereof, which infringe the Asserted Patents, and by instructing those others to infringe the Asserted Patents, as described in detail in Counts I-IV *infra*.

43. Samsung's acts of infringement have caused damage to Plaintiffs. Plaintiffs are entitled to recover from Samsung the damages caused by Samsung's wrongful acts.

**COUNT I**

**Defendants' Infringement of the '666 Patent**

44. Plaintiffs incorporate the allegations of the foregoing paragraphs as if fully restated herein.

45. Plaintiff Techiya is the assignee and lawful owner of the '666 Patent and Plaintiffs hold all right, title and interest in and to the '666 Patent, including the right to sue for past, present, and future damages and to seek injunctive relief. The '666 Patent is valid and enforceable.

46. Defendants have directly infringed, and continue to directly infringe, the '666 Patent by making, using, selling, offering for sale, or importing into the United States products that infringe the '666 Patent including, but not limited to, the Samsung Galaxy Buds+ and other Accused Products. Further discovery may reveal additional infringing products and/or models.

47. For example, and without limitation, the Samsung Galaxy Buds+ and other Accused Products infringe at least claim 1 of the '666 Patent. The Samsung Galaxy Buds+ and other Accused Products fall within the scope of and include, either literally or under the doctrine of equivalents, all of the elements of at least claim 1 of the '666 Patent.

48. The Samsung Galaxy Buds+ is an exemplary product covered by at least claim 1 of the '666 Patent. On information and belief, many other products provided by, and to be provided by, Samsung infringe the '666 Patent.

49. The '666 Patent claims an earphone comprising a first microphone configured to measure an ambient acoustic environment, wherein the first microphone has a first microphone port that is configured to face away from a user when the earphone is inserted; a second microphone configured to measure an acoustic environment closer the ear canal of a wearer than that measured by the first microphone, wherein the second microphone has a second microphone

port that is configured to face toward the user when the earphone is inserted; a speaker configured to play an audio signal; a memory that stores instructions; and a processor that is configured to execute the instructions to perform operations, wherein the processor is coupled to the first microphone, wherein the processor is coupled to the second microphone, wherein the speaker is coupled to the processor, and the operations comprising: receiving a first microphone signal from the first microphone; receiving a second microphone signal from the second microphone; generating an ambient sound signal from at least one of the first microphone signal or the second microphone signal or a combination of both signals; applying an ambient sound gain to the ambient sound signal to generate a modified ambient sound signal; mixing the modified ambient sound signal with an audio content signal to generate a mixed audio signal; and sending the mixed audio signal to the speaker.

50. The Samsung Galaxy Buds+ is an earphone having a first microphone, commonly referred to as an ambient sound microphone, configured to measure an ambient acoustic environment, wherein the first microphone has a first microphone port that is configured to face away from a user when the earphone is inserted into an ear. The Samsung Galaxy Buds+ also has a second microphone, commonly referred to as an ear canal microphone, configured to measure an acoustic environment closer to the ear canal of a wearer than that measured by the first microphone, wherein the second microphone has a second microphone port that is configured to face toward the user when the earphone is inserted in the ear. The Samsung Galaxy Buds+ has a speaker configured to play an audio signal. The Samsung Galaxy Buds+ includes a processor chipset having a memory that stores instructions and a processor that is configured to execute the instructions to perform operations. The processor is coupled to the first microphone, wherein the processor is coupled to the second microphone, wherein the speaker is coupled to the processor.

On information and belief, when the Samsung Galaxy Buds+ are in Ambient Sound Mode the operations performed by the processor include receiving a first microphone signal from the first microphone, receiving a second microphone signal from the second microphone, generating an ambient sound signal from at least one of the first microphone signal or the second microphone signal or a combination of both signals, applying an ambient sound gain to the ambient sound signal to generate a modified ambient sound signal, mixing the modified ambient sound signal with an audio content signal to generate a mixed audio signal, and sending the mixed audio signal to the speaker.

51. Defendants have had notice of their infringement of the '666 Patent at least since the date of filing of the complaint in this action.

52. Defendants have indirectly infringed and continue to indirectly infringe the '666 Patent by actively inducing and contributing to the infringement of the '666 Patent by others, such as retailers and users of the Samsung Galaxy Buds+ within this District.

53. The Accused Products have no substantial non-infringing uses and are a material part of the invention of the '666 Patent. Any manufacture, use, sale, offer for sale, or importation in or into the United States of an Accused Product infringes the '666 Patent. Thus, the Accused Products have no substantial non-infringing uses.

54. Defendants' continued infringement of the '666 Patent has damaged and will continue to damage Plaintiffs.

55. Plaintiffs are entitled to recover damages adequate to compensate for Defendants' infringement.

56. After notice of their infringement of the '666 Patent, Defendants proceeded to make, use, test, sell, and/or offer to sell in this District and elsewhere in the United States, and import into

this District and elsewhere in the United States, the Accused Products. Further, Defendants by disseminating marketing materials, providing user and technical manuals relating to the Accused Products to retailers and users, and by other acts have actively induced infringement by encouraging such third parties to directly infringe the Asserted Patents such as by the retailers selling Accused Products in this District and elsewhere in the United States and by the users of Accused Products using such products in this District and elsewhere in the United States in ways that directly infringe the Asserted Patents. Defendants knew or should have known that the acts they induced constituted patent infringement.

57. On information and belief, Defendants engaged in such activities despite an objectively high likelihood that their actions constituted infringement of valid patents, including the '666 Patent. Defendants knew and should have known that their actions would cause direct and indirect infringement of the '666 Patent.

58. Defendants have willfully infringed and continue to willfully infringe the '666 Patent.

## **COUNT II**

### **Defendants' Infringement of the '237 Patent**

59. Plaintiffs incorporate the allegations of all of the foregoing paragraphs as if fully restated herein.

60. Plaintiff Techiya is the assignee and lawful owner of the '237 Patent and Plaintiffs hold all right, title, and interest in and to the '237 Patent, including the right to sue for past, present, and future damages and to seek injunctive relief. The '237 Patent is valid and enforceable.

61. Defendants have directly infringed, and continue to directly infringe, the '237 Patent by making, using, selling, offering for sale, or importing into the United States products that infringe

the '237 Patent including, but not limited to, the Samsung Galaxy Buds+ and other Accused Products. Further discovery may reveal additional infringing products and/or models.

62. For example, and without limitation, the Samsung Galaxy Buds+ infringe at least claim 1 of the '237 Patent. The Samsung Galaxy Buds+ falls within the scope of and includes, either literally or under the doctrine of equivalents, all of the elements of at least claim 1 of the '237 Patent.

63. The Samsung Galaxy Buds+ is an exemplary product covered by at least claim 1 of the '237 Patent. On information and belief, many other products provided by, and to be provided by, Samsung infringe the '237 Patent.

64. Claim 1 of the '237 Patent claims an earphone device, comprising: an ambient microphone that generates a first acoustic signal where the ambient microphone is configured to measure sound in an ambient environment; an ear canal microphone that generates a second acoustic signal where the ear canal microphone is configured to measure sound closer to a user's ear canal than the ambient microphone; a speaker configured to play an audio content signal; and a processor communicatively linked to the ambient microphone, the ear canal microphone, and the speaker, wherein the processor is configured to perform operations comprising: detecting a voice based on an analysis of the first acoustic signal and the second acoustic signal, and wherein the analysis of the first acoustic signal and the second acoustic signal uses at least one of a coherence analysis, correlation analysis, level-detection, spectral analysis, or a combination thereof; mixing the first acoustic signal with the audio content signal to generate a mixed audio content signal; and sending the mixed audio content signal to the speaker.

65. The Samsung Galaxy Buds+ is an earphone having at least an ambient microphone that generates a first acoustic signal where the ambient microphone is configured to measure sound in an ambient environment and an ear canal microphone that generates a second acoustic



signal where the ear canal microphone is configured to measure sound closer to a user's ear canal than the ambient microphone. The Samsung Galaxy Buds+ also includes a speaker configured to play an audio content signal. The Samsung Galaxy Buds+ includes a chipset having memory and a processor communicatively linked to the ambient microphone, the ear canal microphone, and the speaker, wherein the processor is configured to perform operations. On information and belief, operations performed by the processor include detecting a voice based on an analysis of the first acoustic signal and the second acoustic signal. On information and belief, the analysis of the first acoustic signal and the second acoustic signal uses at least one of a coherence analysis, correlation analysis, level-detection, spectral analysis, or a combination thereof. On information and belief, the processor performs operations causing the mixing of the first acoustic signal with the audio content signal to generate a mixed audio content signal and the sending of the mixed audio content signal to the speaker.

66. Defendants have had notice of their infringement of the '237 Patent at least since the date of filing of the complaint in this action.

67. Defendants have indirectly infringed and continue to indirectly infringe the '237 Patent by actively inducing and contributing to the infringement of the '237 Patent by others, such as retailers and users of the Samsung Galaxy Buds+ within this District.

68. The Accused Products have no substantial non-infringing uses and are a material part of the invention of the '237 Patent. Any manufacture, use, sale, offer for sale, or importation in or into the United States of an Accused Product infringes the '237 Patent. Thus, the Accused Products have no substantial non-infringing uses.

69. Defendants' continued infringement of the '237 Patent has damaged and will continue to damage Plaintiffs.

70. Plaintiffs are entitled to recover damages adequate to compensate for Defendants' infringement.

71. After notice of their infringement of the '237 Patent, Defendants proceeded to make, use, test, sell, and/or offer to sell in this District and elsewhere in the United States, and import into this District and elsewhere in the United States, the Accused Products. Further, Defendants by disseminating marketing materials, providing user and technical manuals relating to the Accused Products, and by other acts have actively induced infringement by encouraging others to directly infringe the Asserted Patents such as by retailers selling Accused Products in this District and elsewhere in the United States and by users of Accused Products using such products in this District and elsewhere in the United States in ways that directly infringe the Asserted Patents. Defendants knew or should have known that the acts they induced constituted patent infringement.

72. On information and belief, Defendants engaged in such activities despite an objectively high likelihood that their actions constituted infringement of valid patents, including the '237 Patent. Defendants knew and should have known that their actions would cause direct and indirect infringement of the '237 Patent.

73. Defendants have willfully infringed and continue to willfully infringe the '237 Patent.

### **COUNT III**

#### **Defendants' Infringement of the '701 Patent**

74. Plaintiffs incorporate the allegations of all of the foregoing paragraphs as if fully restated herein.

75. Plaintiff Techiya is the assignee and lawful owner of the '701 Patent, and Plaintiffs hold all right, title and interest in and to the '701 Patent, including the right to sue for past, present, and future damages and to seek injunctive relief. The '701 Patent is valid and enforceable.

76. Defendants have directly infringed and continue to directly infringe the '701 Patent by making, using, selling, offering for sale, or importing into the United States products that infringe the '701 Patent including, but not limited to, the Samsung Galaxy Buds+. Further discovery may reveal additional infringing products and/or models.

77. For example, and without limitation, the Samsung Galaxy Buds+ infringe at least claim 1 of the '701 Patent. The Samsung Galaxy Buds+ and other Accused Products fall within the scope of and include, either literally or under the doctrine of equivalents, all of the elements of at least claim 1 of the '701 Patent.

78. The Samsung Galaxy Buds+ is an exemplary product covered by at least claim 1 of the '701 Patent. On information and belief, many other products provided by, and to be provided by, Samsung infringe the '701 Patent.

79. The '701 Patent claims a method comprising: receiving an electronic ambient signal, where the ambient signal is produced by measurement by an ambient microphone; receiving an electronic internal signal, where the electronic internal signal is produced by measurement of an ear canal microphone, wherein the electronic internal signal includes an echo of a spoken voice generated by a wearer of an earpiece; calculating a background noise signal using the electronic ambient signal and the electronic internal signal; producing a modified electronic internal signal by reducing the echo in the electronic internal signal; generating a voice activity level using the modified electronic signal and the background noise signal; mixing the electronic ambient signal with the modified electronic internal signal in a ratio dependent on the

background noise signal to produce a mixed signal that includes a reduced echo; and sending the mixed signal to an ear canal receiver.

80. The Samsung Galaxy Buds+ is an earphone that includes an ambient sound microphone, an ear canal microphone, and an ear canal speaker. The Galaxy Buds+ further includes a chipset having a processor and a memory for storing instructions which when executed by the processor cause operations. On information and belief, the operations include operations implemented by the chipset to reduce the echo of a voice signal produced by the ambient sound microphone and the ear canal microphone. The execution of the operations by the processor in the chipset cause the Samsung Galaxy Buds+ to perform a method that includes receiving an electronic ambient signal produced by measurement by the ambient sound microphone and receiving an electronic internal signal produced by measurement of the ear canal microphone. On information and belief, the electronic internal signal includes an echo of a spoken voice generated by a wearer of an earphone. On information and belief, the method performed by the Samsung Galaxy Buds+ includes calculating a background noise signal using the electronic ambient signal and the electronic internal signal to produce a modified electronic internal signal having reduced echo in the electronic internal signal. On information and belief, the processor and other components of the Samsung Galaxy Buds+ generate a voice activity level using the modified electronic signal and the background noise signal and mix the electronic ambient signal with the modified electronic internal signal in a ratio dependent on the background noise signal to produce a mixed signal that includes a reduced echo and send the mixed signal to an ear canal receiver.

81. Defendants have had notice of their infringement of the '701 Patent at least since the date of filing of the complaint in this action.

82. Defendants have indirectly infringed and continue to indirectly infringe the '701 Patent by actively inducing and contributing to the infringement of the '701 Patent by others, such as users of the Samsung Galaxy Buds+ within this District.

83. The Accused Products have no substantial non-infringing uses and are a material part of the invention of the '701 Patent. Any use of an Accused Product infringes the '701 Patent. Thus, the Accused Products have no substantial non-infringing uses.

84. Defendants continued indirect infringement of the '701 Patent has damaged and will continue to damage Plaintiffs.

85. Plaintiffs are entitled to recover damages adequate to compensate for Defendants' infringement.

86. After notice of their infringement of the '701 Patent, Defendants proceeded to make, use, test, sell, and/or offer to sell in this District and elsewhere in the United States, and import into this District and elsewhere in the United States, the Accused Products. Further, Defendants by disseminating marketing materials, providing user and technical manuals relating to the Accused Products, and by other acts have actively induced infringement by encouraging others to directly infringe the Asserted Patents such as by retailers selling Accused Products in this District and elsewhere in the United States and by users of Accused Products using such products in this District and elsewhere in the United States in ways that directly infringe the Asserted Patents. Defendants knew or should have known that the acts they induced constituted patent infringement.

87. On information and belief, Defendants engaged in such activities despite an objectively high likelihood that their actions constituted infringement of valid patents, including the

‘701 Patent. Defendants knew and should have known that their actions would cause direct and indirect infringement of the ‘701 Patent.

88. Defendants have willfully infringed and continue to willfully infringe the ‘701 Patent.

#### **COUNT IV**

##### **Defendants’ Infringement of the ‘259 Patent**

89. Plaintiffs incorporate the allegations of all of the foregoing paragraphs as if fully restated herein.

90. Plaintiff Techiya is the assignee and lawful owner of the ‘259 Patent and Plaintiffs hold all right, title and interest in and to the ‘259 Patent, including the right to sue for past, present, and future damages and to seek injunctive relief. The ‘259 Patent is valid and enforceable.

91. Defendants have directly infringed, and continue to directly infringe, the ‘259 Patent by making, using, selling, offering for sale, or importing into the United States products that infringe the ‘259 Patent including, but not limited to, the Samsung Galaxy S21 5G and other Accused Products. Further discovery may reveal additional infringing products and/or models.

92. For example, and without limitation, the Samsung Galaxy S21 5G infringes at least claim 1 of the ‘259 Patent. The Accused Products fall within the scope of and include, either literally or under the doctrine of equivalents, all of the elements of at least claim 1 of the ‘259 Patent.

93. The Bixby-enabled Samsung Galaxy S21 5G and other Bixby-enabled Samsung Galaxy smartphones are exemplary products covered by at least claim 1 of the ‘259 Patent. On information and belief, many other products provided by, and to be provided by, Samsung infringe the ‘259 Patent.

94. The ‘259 Patent claims a wearable device, comprising: a microphone; a memory that stores instructions; and a processor that executes the instructions to perform operations, the

operations comprising: receiving an acoustic signal from the microphone configured to measure an ambient environment; analyzing the acoustic signal to detect a trigger event; opening a communication channel with a remote server if a trigger event is detected; generating metadata; transmitting the metadata, and the acoustic signal to the server via the communication channel; and receiving, from the server an analysis of the acoustic signal including whether a sound signature has been detected.

95. The Bixby-enabled Samsung Galaxy S21 5G and other Bixby-enabled Samsung Galaxy smartphones include a microphone, memory that stores instructions, and a processor that executes the instructions to perform operations. The operations include receiving an acoustic signal from the microphone configured to measure an ambient environment and analyzing the acoustic signal to detect a trigger event. For example, the operations including analyzing the acoustic signal to detect the word “Hi Bixby” followed by a command to identify a song from acoustic signals captured by the microphone as the song is played. On information and belief, the processor performs steps for opening a communication channel with a remote server, e.g., the Bixby server, generates metadata associated with the user command and the acoustic signal and causes the metadata and acoustic signal to be transmitted to the server via the communication channel. The processor receives from the server an analysis of the acoustic signal including whether a sound signature has been detected. For example, the processor may receive the title and/or artist of the song.

96. Defendants have had notice of their infringement of the ‘259 Patent at least since the date of filing of the complaint in this action.

97. Defendants have indirectly infringed and continue to indirectly infringe the ‘259 Patent by actively inducing and contributing to the infringement of the ‘259 Patent by others, such as users of the Samsung Galaxy S21 5G enabled with Bixby within this District.

98. The Accused Products have no substantial non-infringing uses and are a material part of the invention of the ‘259 Patent. The Accused Products have no substantial non-infringing uses.

99. Defendants continued indirect infringement of the ‘259 Patent has damaged and will continue to damage Plaintiffs.

100. Plaintiffs are entitled to recover damages adequate to compensate for Defendants’ infringement.

101. After notice of their infringement of the of the ‘259 Patent, Defendants proceeded to make, use, test, sell, and/or offer to sell in this District and elsewhere in the United States, and import into this District and elsewhere in the United States, the Accused Products. Further, Defendants by disseminating marketing materials, providing user and technical manuals relating to the Accused Products, and by other acts have actively induced infringement by encouraging others to directly infringe the Asserted Patents such as by retailers selling Accused Products in this District and elsewhere in the United States and by users of Accused Products using such products in this District and elsewhere in the United States in ways that directly infringe the Asserted Patents. Defendants knew or should have known that the acts they induced constituted patent infringement.

102. On information and belief, Defendants engaged in such activities despite an objectively high likelihood that their actions constituted infringement of valid patents, including the ‘259 Patent. Defendants knew and should have known that their actions would cause direct and indirect infringement of the ‘259 Patent.



103. Defendants have willfully infringed and continue to willfully infringe the '259 Patent.

**DEMAND FOR JURY TRIAL**

104. Pursuant to Fed. R. Civ. P. 38, Plaintiffs hereby demand trial by jury on all claims and issues so triable.

**PRAYER FOR RELIEF**

105. WHEREFORE, Plaintiffs respectfully request the following relief:

- a) A judgment that the Asserted Patents are valid and enforceable;
- b) A judgment that Defendants have infringed, directly and indirectly, either literally or under the Doctrine of Equivalents, one or more claims of the '666 Patent;
- c) A judgment that the Defendants' infringement of the '666 Patent was willful, and that the Defendants' continued infringement of the '666 Patent is willful;
- d) A judgment that Defendants have infringed, directly and indirectly, either literally or under the Doctrine of Equivalents, one or more claims of the '237 Patent;
- e) A judgment that the Defendants' infringement of the '237 Patent was willful, and that the Defendants' continued infringement of the '237 Patent is willful;
- f) A judgment that Defendants have infringed, directly and indirectly, either literally or under the Doctrine of Equivalents, one or more claims of the '701 Patent;
- g) A judgment that the Defendants' infringement of the '701 Patent was willful, and that the Defendants' continued infringement of the '701 Patent is willful;

- h) A judgment that Defendants have infringed, directly and indirectly, either literally or under the Doctrine of Equivalents, one or more claims of the '259 Patent;
- i) A judgment that the Defendants' infringement of the '259 Patent was willful, and that the Defendants' continued infringement of the '259 Patent is willful;
- j) A judgment that awards Plaintiffs all appropriate damages under 35 U.S.C. § 284 for Defendants' past infringement, and any continuing or future infringement of the Asserted Patents, including pre or post judgment interest, costs, and disbursements as justified under 35 U.S.C. § 284 and, if necessary to adequately compensate Plaintiffs for Defendants' infringement, an accounting:
  - i. That Plaintiffs be awarded enhanced damages by reason of the Defendants' willful infringement of the '666 Patent;
  - ii. That Plaintiffs be awarded enhanced damages by reason of the Defendants' willful infringement of the '237 Patent;
  - iii. That Plaintiffs be awarded enhanced damages by reason of the Defendants' willful infringement of the '701 Patent;
  - iv. That Plaintiffs be awarded enhanced damages by reason of the Defendants' willful infringement of the '259 Patent;
  - v. That this case be declared exceptional within the meaning of 35 U.S.C. § 285 and that Plaintiffs be awarded their reasonable attorneys' fees against the Defendants incurred in prosecuting this action; and
  - vi. That Plaintiffs be awarded costs and expenses incurred in prosecuting this action.

- k) A preliminary and permanent injunction against Defendants, their subsidiaries, or anyone acting on their behalf from making, using, selling, offering to sell, or importing any products that infringe the Asserted Patents, and any other injunctive relief the Court deems just and equitable; and
- l) A judgment that Plaintiffs be awarded such further relief at law or in equity as the Court deems just and proper.

Dated: February 14, 2022

Respectfully submitted,

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