IN THE UNITED STATES DISTRICT COURT
FOR THE EASTERN DISTRICT OF TEXAS
SHERMAN DIVISION

X-MOBILE TECHNOLOGIES LLC, Plaintiff, v. AMAZON.COM, INC. AND AMAZON.COM LLC, Defendants.	CIVIL ACTION NO. 4:17-cv-703 COMPLAINT FOR PATENT INFRINGEMENT **JURY TRIAL DEMANDED**

COMPLAINT FOR PATENT INFRINGEMENT

Plaintiff X-Mobile Technologies LLC ("X-Mobile") files this complaint against Amazon.com, Inc., and Amazon.com LLC (collectively, "Defendant" or "Amazon"), alleging, based on its own knowledge as to itself and its own actions and based on information and belief as to all other matters, as follows:

PARTIES

1. X-Mobile is a limited liability company formed under the laws of the State of Texas.

2. Defendant Amazon.com, Inc. is a corporation organized under the laws of the state of Delaware. It can be served with process by serving its registered agent: Corporation Service Company, 2711 Centerville Rd., Suite 400, Wilmington, Delaware 19808.

3. Defendant Amazon.com LLC is a limited liability company organized under the laws of the state of Delaware. It can be served with process by serving its registered agent: Corporation Service Company; 211 E. 7th Street, Suite 620; Austin, Texas 78701-3218.

Amazon.com LLC is a subsidiary of Amazon.com, Inc. Amazon.com, Inc. and Amazon.com LLC are collectively referred to as "Amazon."

4. Amazon has a regular and established place of business in this District, including, e.g., distribution facilities, employees, and other business. For example, Amazon's property was appraised on the property tax rolls by Denton County at $248 million and $428,000. https://www.dentoncad.com/api/notices/notice/699143?year=2017; https://www.dentoncad.com/api/notices/notice/659411?year=2017; https://blog.taxjar.com/amazon-warehouse-locations/ ("#DFW6 – 940 W Bethel Road Coppell, TX 75019"); https://trustfile.avalara.com/resources/amazon-warehouse-locations/. As another example, Amazon has its Amazon Fulfillment Center FTW3-4 at 15201 Heritage Pkwy, Fort Worth, TX 76177, which is in this District. Amazon also maintains data center(s) in Dallas/Fort Worth area. Amazon offers its products and/or services, including those accused herein of infringement, to customers and potential customers located in Texas and in this District. Amazon derives financial benefits through its business in Texas and in this District. *See, e.g.*, http://dir.texas.gov/View-Search/Contracts-Detail.aspx?contractnumber=DIR-TSO-2733; https://aws.amazon.com/contract-center/cloud-services-for-the-state-of-texas/.

JURISDICTION AND VENUE

5. This is an action for infringement of United States patents arising under 35 U.S.C. §§ 271, 281, and 284–85, among others. This Court has subject matter jurisdiction of the action under 28 U.S.C. §1331 and §1338(a).

6. Venue is proper in this district pursuant to 28 U.S.C. §§ 1391 and 1400(b). Upon information and belief, Defendant has transacted business in this district and has committed, by

itself or in concert with others, acts of patent infringement in this district. And as set forth above, Amazon has a regular and established place of business in this District.

7. Defendant is subject to this Court's specific and general personal jurisdiction pursuant to due process and/or the Texas Long Arm Statute, due at least to Defendant's substantial business in this forum, including: (i) at least a portion of the infringements alleged herein; and/or (ii) regularly doing or soliciting business, engaging in other persistent courses of conduct, and/or deriving substantial revenue from goods and services provided to individuals in Texas and in this district.

COUNT I

DIRECT INFRINGEMENT OF U.S. PATENT NO. 7,162,426

8. On January 9, 2007, United States Patent No. 7,162,426 ("the '426 Patent") was duly and legally issued by the United States Patent and Trademark Office for an invention entitled "Computer Motherboard Architecture with Integrated DSP for Continuous and Command and Control Speech Processing."

9. X-Mobile is the owner of the '426 Patent, with all substantive rights in and to that patent, including the sole and exclusive right to prosecute this action and enforce the '426 Patent against infringers, and to collect damages for all relevant times.

10. Defendant made, had made, used, imported, provided, supplied, distributed, sold, and/or offered for sale products and/or systems including, for example, its Amazon Echo family of products (the "accused products"):

(Source: https://www.amazon.com/dp/product/B01E6AO69U)

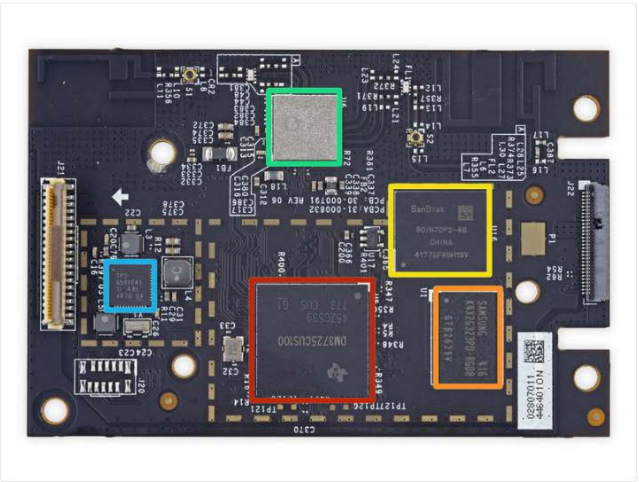
11. By doing so, Defendant has directly infringed (literally and/or under the doctrine of equivalents) at least Claims 1 and 20 of the ‘426 Patent. Defendant’s infringement in this regard is ongoing.

12. Amazon has infringed the ‘426 Patent by making, having made, using, importing, providing, supplying, distributing, selling or offering for sale products with a computer motherboard architecture.

13. The accused products include a computer motherboard possessing typical components including a CPU, a data bus, a power interface, and an audio input data pathway connecting the audio input of the motherboard to the CPU.

14. The accused products include a DSP chip in the audio input data path, wherein the DSP chip is co-located with the CPU on the motherboard, within for example, a package such as the Texas Instruments DM3725CUS100:

Step 10



- Here's what's powering the Echo:
  - Texas Instruments DM3725CUS100 Digital Media Processor
  - Samsung K4X2G323PD-8GD8 256 MB LPDDR1 RAM
  - SanDisk SDIN7DP2-4G 4 GB iNAND Ultra Flash Memory
  - Qualcomm Atheros QCA6234X-AM2D Wi-Fi and Bluetooth Module
  - Texas Instruments TPS65910A1 Integrated Power Management IC

(Source: https://www.ifixit.com/Teardown/Amazon+Echo+Teardown/33953)

1.3 Functional Block Diagram

The functional block diagram of the DM3730/25 Digital Media Processor is shown below.

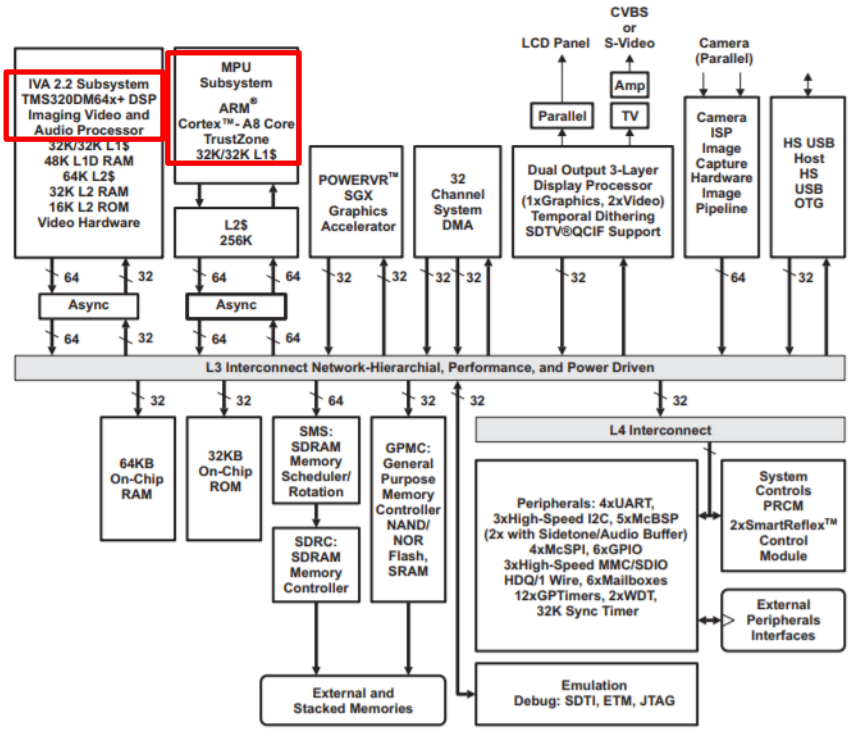


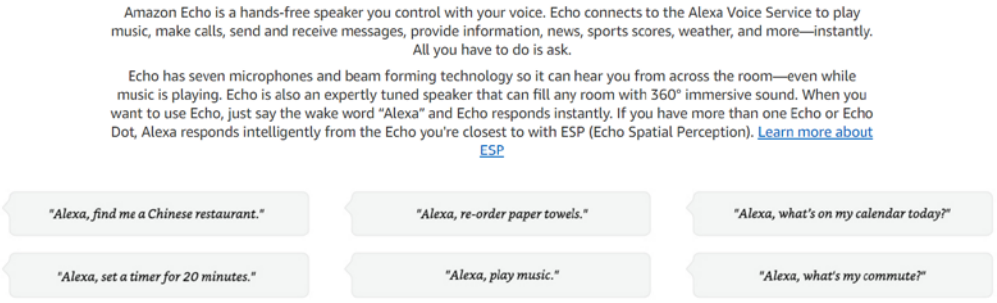
Figure 1-1. DM3730/25 Functional Block Diagram

(Source : http://www.ti.com/lit/ds/symlink/dm3725.pdf)

15. The accused products include a bridge interfacing between said DSP chip and the bus on the computer motherboard.

16. The accused products include a memory in said DSP chip.

17. The accused products include a command and control speech engine (for example, Alexa) residing in said memory of said DSP chip:



(Source: https://www.amazon.com/dp/product/B00X4WHP5E)

18. The accused products include a DSP enabled to operate in either command and control mode or continuous speech mode and that serves as the preprocessor of all speech input prior to execution of instructions by the CPU to process the speech input.

19. The accused products include a speech engine that includes a vocabulary of speech terms enabled to be loaded into said memory which are associated with specific instructions or contextual environments.

20. The accused products include a DSP enabled to be dynamically set by a user in either a continuous speech mode or a command and control mode.

21. Amazon has also infringed the ‘426 Patent by making, having made, using, importing, providing, supplying, distributing, selling or offering for sale products using a method of processing speech.

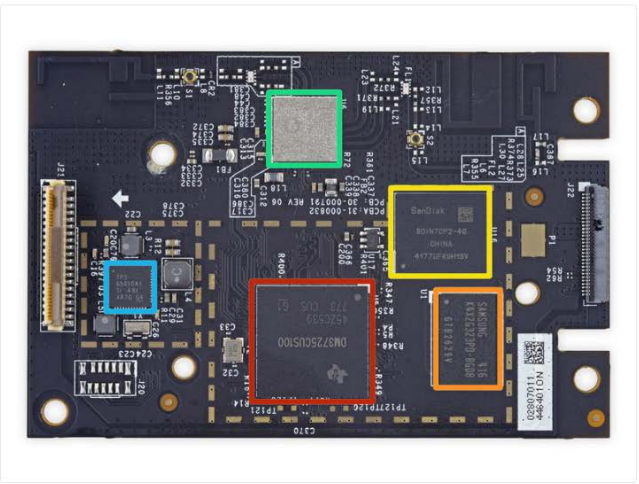
22. The method practiced by the accused products includes setting a computer in either command and control mode or continuous speech mode.

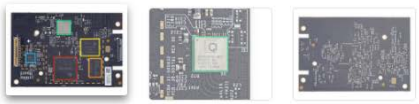
23. The method practiced by the accused products includes inputting speech into an audio input device wherein said audio input device is electrically connected to said computer.

24. The method practiced by the accused products includes converting speech from an analog format to an audio digital signal.

25. The method practiced by the accused products includes transmitting said digital signal to a digital signal processor, wherein said digital signal processor is co-located with a CPU on a motherboard of said computer:

Step 10





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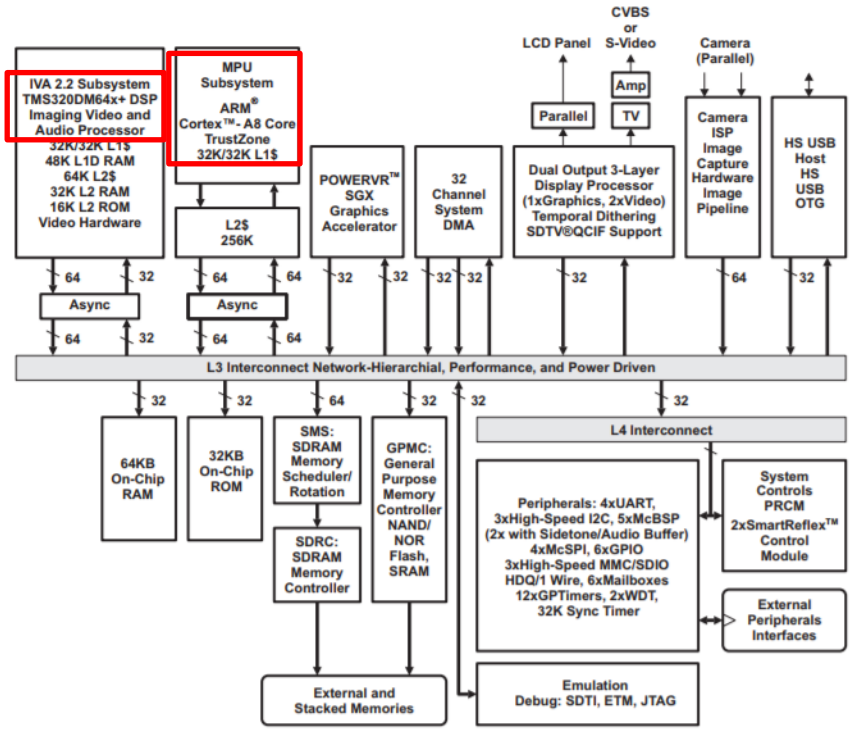


Figure 1-1. DM3730/25 Functional Block Diagram

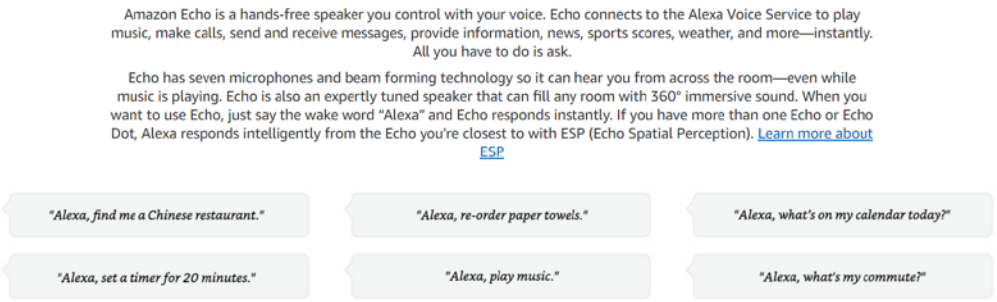
(Source : http://www.ti.com/lit/ds/symlink/dm3725.pdf)

26. The method practiced by the accused products includes said digital signal processor is enabled to function as a preprocessor of all speech input, analyzing said digital signal with at least said digital signal processor and a speech engine residing in a memory of said digital signal processor on said motherboard and electrically connected to said digital signal processor,

27. The method practiced by the accused products includes loading an appropriate vocabulary into said speech engine in said or of said digital signal processor, depending on the context of the operation being performed by a user

28. The method practiced by the accused products includes transmitting said analyzed digital signal of a computer command to a processor in electrical connection to said digital signal processor and said computer and transmitting said analyzed digital signal of continuous speech to a processor in electrical connection to said digital signal processor and said computer.

29. The method practiced by the accused products includes performing an operation or command representative of said analyzed digital signal by said processor:



(Source: https://www.amazon.com/dp/product/B00X4WHP5E)

30. Amazon has had knowledge of the ‘426 Patent at least as of the date when it was notified of the filing of this action.

31. X-Mobile has been damaged as a result of the infringing conduct by Defendant alleged above. Thus, Defendant is liable to X-Mobile in an amount that adequately compensates it for such infringements, which, by law, cannot be less than a reasonable royalty, together with interest and costs as fixed by this Court under 35 U.S.C. § 284.

32. X-Mobile and/or its predecessors-in-interest have satisfied all statutory obligations required to collect pre-filing damages for the full period allowed by law for infringement of the ‘426 Patent.

COUNT II

DIRECT INFRINGEMENT OF U.S. PATENT NO. 6,690,351

33. On February 10, 2004, United States Patent No. 6,690,351 ("the '351 Patent") was duly and legally issued by the United States Patent and Trademark Office for an invention entitled "Computer Display Optimizer."

34. X-Mobile is the owner of the '351 Patent, with all substantive rights in and to that patent, including the sole and exclusive right to prosecute this action and enforce the '351 Patent against infringers, and to collect damages for all relevant times.

35. Defendant made, had made, used, imported, provided, supplied, distributed, sold, and/or offered for sale products and/or systems including its Amazon Fire HD 8 family of products (the "accused products"):

(Source: https://www.amazon.com/dp/B01J94SWWU)

36. By doing so, Defendant has directly infringed (literally and/or under the doctrine of equivalents) at least Claim 1 of the '351 Patent. Defendant's infringement in this regard is ongoing.

37. Amazon has infringed the ‘351 Patent by making, having made, using, importing, providing, supplying, distributing, selling or offering for sale hands free user or operator supported mobile computer systems having hands free, activating means, a processor and a display means, with the processor in electrical connection to the display means.

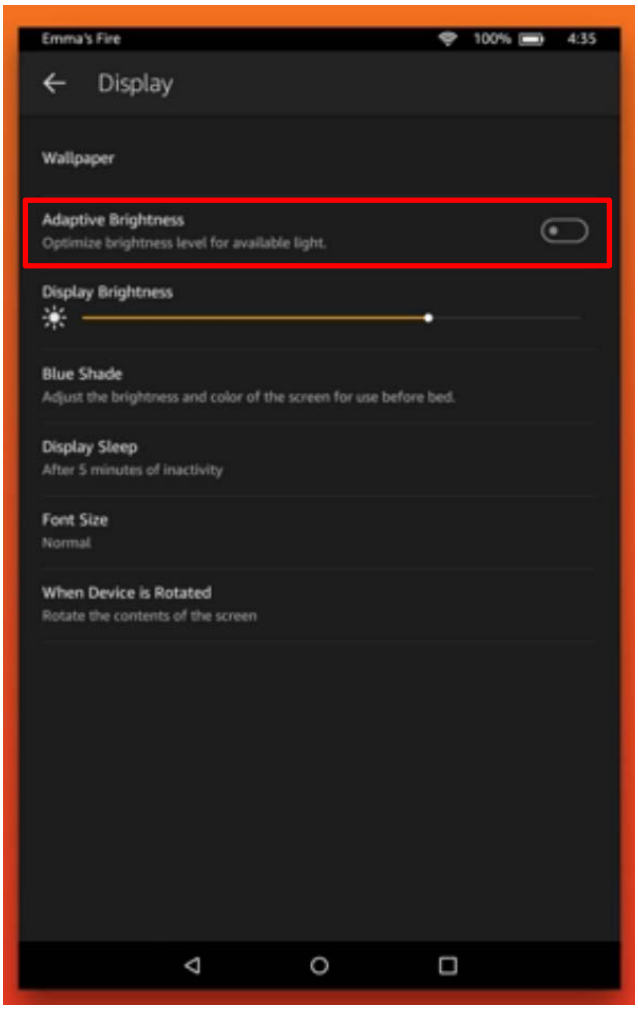
38. The accused products include at least one sensor for optimizing internal settings in said display when said sensor and said display are in communication:

Sensors	Accelerometer, ambient light sensor

(Source: https://www.amazon.com/dp/B01J94SWWU#tech)

39. The accused products include means in the computer to receive information from the sensor and to transmit it to a data processing means.

40. The accused products include means to translate the data into computer commands to effect control and alteration of the computer system to coincide with any changes resulting from input of the sensor:



(Source: screenshot of video at https://www.amazon.com/gp/help/customer/display.html?nodeId=201829930)

41. The accused products include that the sensor is enabled to at least measure conditions and optimize internal settings based upon environmental conditions and the type of the display means and reflectivity characteristics of a physical glass and coatings of the display means.

42. Amazon has had knowledge of the '351 Patent at least as of the date when it was notified of the filing of this action.

43. X-Mobile has been damaged as a result of the infringing conduct by Defendant alleged above. Thus, Defendant is liable to X-Mobile in an amount that adequately compensates it for such infringements, which, by law, cannot be less than a reasonable royalty, together with interest and costs as fixed by this Court under 35 U.S.C. § 284.

44. X-Mobile and/or its predecessors-in-interest have satisfied all statutory obligations required to collect pre-filing damages for the full period allowed by law for infringement of the ‘351 Patent.

COUNT III

DIRECT INFRINGEMENT OF U.S. PATENT NO. 6,262,889

45. On July 17, 2001, United States Patent No. 6,262,889 (“the ‘889 Patent”) was duly and legally issued by the United States Patent and Trademark Office for an invention entitled “Insulated Mobile Computer.”

46. X-Mobile is the owner of the ‘889 Patent, with all substantive rights in and to that patent, including the sole and exclusive right to prosecute this action and enforce the ‘889 Patent against infringers, and to collect damages for all relevant times.

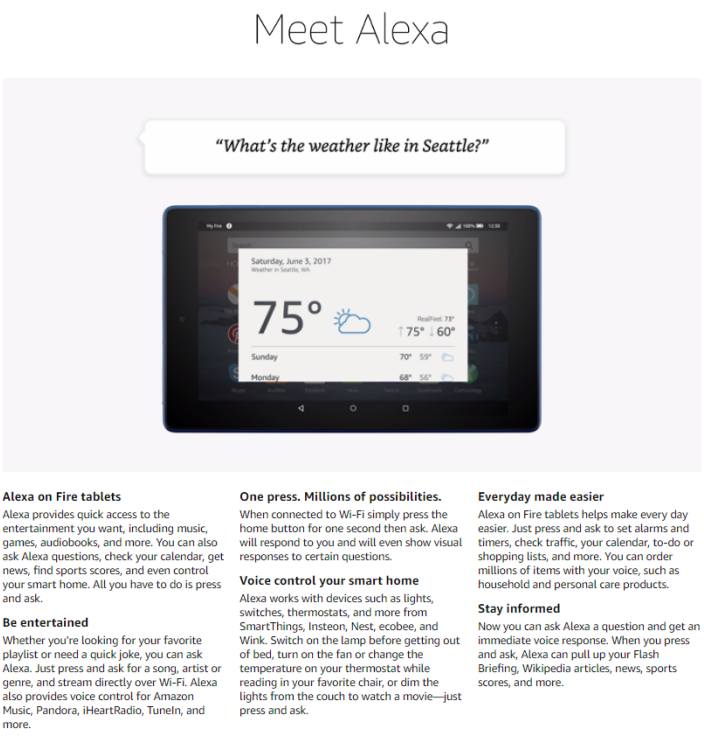
47. Defendant made, had made, used, imported, provided, supplied, distributed, sold, and/or offered for sale products and/or systems including its Amazon Fire HD 8 family of products (the “accused products”):

(Source: https://www.amazon.com/dp/B01J94SWWU)

48. By doing so, Defendant has directly infringed (literally and/or under the doctrine of equivalents) at least Claim 1 of the '889 Patent. Defendant's infringement in this regard is ongoing.

49. Amazon has infringed the '889 Patent by making, having made, using, importing, providing, supplying, distributing, selling or offering for sale user supported, hands-free activation computer systems having a computer housing and a display means, the computer housing consisting of all of the components of a conventional computer and having located therein a battery to supply power to the system.

50. The accused products include hands-free activation:



(Source: https://www.amazon.com/dp/B01J94SWWU#tech)

51. The accused products include the computer housing having a section that will be adjacent the user when in use and supported by the user.

52. The accused products include that the section is constructed of a heat insulating material and forming thereby an internal insulating wall.

53. The accused products include the battery comprising an insulating cover which is located in said housing immediately adjacent the internal insulating wall to provide thereby double insulation for any heat generated by the system within the computer housing at a location closest to the user when in use:

(Source: https://www.amazon.com/dp/B01J94SWWU)

(Source: https://www.youtube.com/watch?v=RFs5TsHiJsY)

54. Amazon has had knowledge of the '889 Patent at least as of the date when it was notified of the filing of this action.

55. X-Mobile has been damaged as a result of the infringing conduct by Defendant alleged above. Thus, Defendant is liable to X-Mobile in an amount that adequately compensates it for such infringements, which, by law, cannot be less than a reasonable royalty, together with interest and costs as fixed by this Court under 35 U.S.C. § 284.

56. X-Mobile and/or its predecessors-in-interest have satisfied all statutory obligations required to collect pre-filing damages for the full period allowed by law for infringement of the ‘889 Patent.

ADDITIONAL ALLEGATIONS REGARDING INDIRECT INFRINGEMENT

57. Defendant has also indirectly infringed the ‘426, ‘351, and ‘889 Patents by inducing others to directly infringe the ‘426, ‘351, and ‘889 Patents. Defendant has induced the end-users, Defendant’s customers, to directly infringe (literally and/or under the doctrine of equivalents) the ‘426, ‘351, and ‘889 Patents by using the accused products. Defendant took active steps, directly and/or through contractual relationships with others, with the specific intent to cause them to use the accused products in a manner that infringes one or more claims of the patents-in-suit, including, for example, claim 20 of the ‘426 Patent, claim 1 of the ‘351 Patent, and claim 1 of the ‘889 Patent. Such steps by Defendant included, among other things, advising or directing customers and end-users to use the accused products in an infringing manner; advertising and promoting the use of the accused products in an infringing manner; and/or distributing instructions that guide users to use the accused products in an infringing manner. Defendant performed these steps, which constitute induced infringement, with the knowledge of the ‘426, ‘351, and ‘889 Patents and with the knowledge that the induced acts would constitute infringement. Defendant was and is aware that the normal and customary use of the accused products by Defendant’s customers would infringe the ‘426, ‘351, and ‘889 Patents. Defendant’s inducement is ongoing.

58. Defendant has also indirectly infringed by contributing to the infringement of the ‘426, ‘351, and ‘889 Patents. Defendant has contributed to the direct infringement of the ‘426, ‘351, and ‘889 Patents by the end-user of the accused products. The accused products have

special features that are specially designed to be used in an infringing way and that have no substantial uses other than ones that infringe the ‘426, ‘351, and ‘889 Patents, including, for example, claim 20 of the ‘426 Patent, claim 1 of the ‘351 Patent, and claim 1 of the ‘889 Patent. The special features include the Alexa feature used in a manner that infringes the ‘426 Patent. The special features also include automatic brightness settings to be used in a manner that infringes the ‘351 Patent. The special features also include voice activation features used in a manner that infringes the ‘889 Patent. The special features constitute a material part of the invention of one or more of the claims of the ‘426, ‘351, and ‘889 Patents and are not staple articles of commerce suitable for substantial non-infringing use. Defendant’s contributory infringement is ongoing.

59. Defendant also has knowledge of the ‘426, ‘351, and ‘889 Patents at least as of the date when it was notified of the filing of this action.

60. Defendant’s direct and indirect infringement of the ‘426, ‘351, and ‘889 Patents is, has been, and continues to be willful, intentional, deliberate, and/or in conscious disregard of X-Mobile’s rights under the patent.

61. X-Mobile has been damaged as a result of the infringing conduct by defendant alleged above. Thus, Defendant is liable to X-Mobile in an amount that adequately compensates it for such infringements, which, by law, cannot be less than a reasonable royalty, together with interest and costs as fixed by this Court under 35 U.S.C. § 284.

JURY DEMAND

X-Mobile hereby requests a trial by jury on all issues so triable by right.

PRAYER FOR RELIEF

X-Mobile requests that the Court find in its favor and against Defendant, and that the

Court grant X-Mobile the following relief:

a. Judgment that one or more claims of the ‘426, ‘351, & ‘889 Patents have been infringed, either literally and/or under the doctrine of equivalents, by Defendant and/or all others acting in concert therewith;

b. A permanent injunction enjoining Defendant and its officers, directors, agents, servants, affiliates, employees, divisions, branches, subsidiaries, parents, and all others acting in concert therewith from infringement of the ‘426, ‘351, & ‘889 Patents;

c. Judgment that Defendant accounts for and pays to X-Mobile all damages to and costs incurred by X-Mobile because of Defendant’s infringing activities and other conduct complained of herein;

d. That X-Mobile be granted pre-judgment and post-judgment interest on the damages caused by Defendant’s infringing activities and other conduct complained of herein;

e. That this Court declare this an exceptional case and award X-Mobile its reasonable attorney’s fees and costs in accordance with 35 U.S.C. § 285; and

f. That X-Mobile be granted such other and further relief as the Court may deem just and proper under the circumstances.

Dated: October 2, 2017

Respectfully submitted,

/s/ *Zachariah S. Harrington*

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Attorneys for X-Mobile LLC

CERTIFICATE OF SERVICE

I hereby certify that on the 2nd day of October 2017, I electronically filed the foregoing with the Clerk of the Court using the CM/ECF system, which will send notification of such filing to all counsel of record.

/s/ *Zachariah S. Harrington*
Zachariah S. Harrington