

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

X-MOBILE TECHNOLOGIES LLC,

Plaintiff,

v.

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

Defendants.

CIVIL ACTION NO. 4:17-cv-697

FIRST AMENDED COMPLAINT FOR
PATENT INFRINGEMENT

JURY TRIAL DEMANDED

FIRST AMENDED COMPLAINT FOR PATENT INFRINGEMENT

Plaintiff X-Mobile Technologies LLC (“X-Mobile”) files this first amended complaint against Samsung Electronics America, Inc. and Samsung Electronics Co. Ltd. (“Defendants” or “Samsung”), 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 Samsung Electronics America, Inc. is a corporation organized under the laws of the state of New York. Samsung’s telecommunications division and business for North America is headquartered in Richardson, Texas. It can be served with process by serving its registered agent: CT Corporation System, 1999 Bryan St., Ste. 900 Dallas, Texas, 75201-3136.

3. Defendant Samsung Electronics Co. Ltd. is a South Korean corporation having a place of business at 129 Samsung-ro, Yeongtong-gu, Suwon-si, Gyeonggi-do 443-742, Korea.

JURISDICTION AND VENUE

4. 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).

5. Venue is proper in this district pursuant to 28 U.S.C. § 1400(b). Defendants have transacted business in this district and has committed, by themselves or in concert with others, acts of patent infringement in this district. Samsung has a regular and established place of business in this judicial district at 1301 E. Lookout Drive, Richardson, Texas 75080. In addition, because Samsung Electronics Co. Ltd. is a foreign corporation, it may be sued in this judicial district.

6. Defendants are 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 Defendants’ 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

7. 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.”

8. 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.

9. Defendants made, had made, used, imported, provided, supplied, distributed, sold, and/or offered for sale products and/or systems including, for example, their Galaxy S8 phone family of products that have a Snapdragon 835 system on a chip with a DSP for Bixby and/or Okay Google functionality and their ES8000 LED TV Smart TV family of products (the “accused products”):



(Source: <http://www.samsung.com/us/mobile/phones/galaxy-s/galaxy-s8-plus-64gb--unlocked--sm-g955uzkaxaa/>)



(Source : <https://www.amazon.com/Samsung-UN55ES8000-55-Inch-1080p-Silver/dp/B00752NJMC>)

10. By doing so, Defendants have directly infringed (literally and/or under the doctrine of equivalents) at least Claims 1 and 20 of the '426 Patent. Defendants' infringement in this regard is ongoing.

11. Samsung 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.

12. 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.

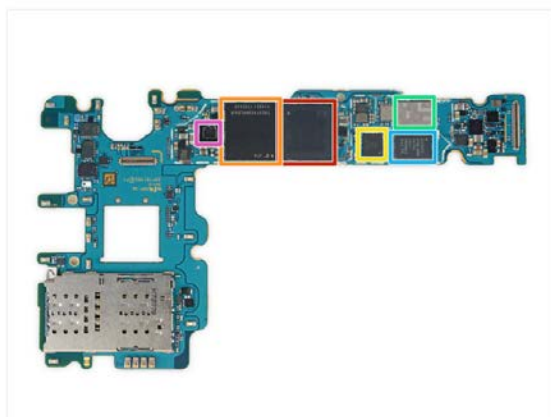
13. The accused products include a DSP chip in the audio input data path, wherein the DSP chip is co-located with the CPU on the motherboard:

Processor

Processor Speed, Type

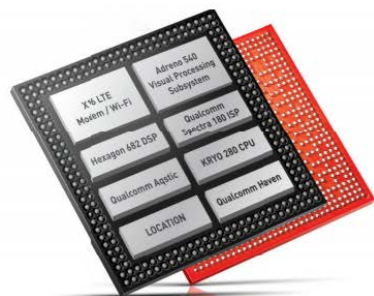
MSM 8998 Octa-Core 2.35Ghz (Quad-Core) + 1.9GHz (Quad)

(Source: <http://www.samsung.com/us/mobile/phones/galaxy-s/galaxy-s8-plus-64gb--unlocked--sm-g955uzkaxaa/#specs>)



- We push the cameras off to the side in order to pore over this motherboard's silicon. Our findings include:
- Samsung K3UH5H50MM-NGCJ 4 GB LPDDR4 RAM layered over the MSM8998 Snapdragon 835
- Toshiba THGAF4G9N4LBAIR 64 GB UFS (NAND flash + controller)
- Qualcomm Aqstic WCD9341 audio codec
- Skyworks 78160-11
- Avago AFEM-9066
- Silicon Mitus SM5720 Interface PMIC

(Source: <https://www.ifixit.com/Teardown/Samsung+Galaxy+S8%2B+Teardown/87086>)



Snapdragon 835 mobile platform. Supporting a cutting-edge connected, immersive and intelligent all-day experience.

FEATURES & SPECIFICATIONS³

GPU

- + Adreno 540 GPU
- + OpenGL ES 3.2, OpenCL 2.0 full, Vulkan, DX12

DSP

- + Hexagon 682 DSP with:
 - Hexagon Vector eXTensions
 - Qualcomm All-Ways Aware
 - TensorFlow and Halide support
 - Qualcomm® Neural Processing Engine (NPE) SDK

Display

- + UltraHD Premium-ready
- + 4K Ultra HD, 60 FPS
- + 10-bit color depth
- + DisplayPort, HDMI, and USB Type-C support

Camera

- + Qualcomm Spectra 180 ISP
- + Dual 14-bit ISPs
- + Up to 16 MP dual camera
- + Up to 32 MP single camera
- + Qualcomm® Clear Sight™ camera features, Hybrid Autofocus, Optical Zoom, hardware-accelerated Face Detection, HDR Video Recording

Video

- + Up to 4K UltraHD capture @ 30 fps
- + Up to 4K UltraHD playback @ 60 fps
- + H.264 (AVC), H.265 (HEVC), VP9

Memory

- + LPDDR4x, dual channel
- + UFS2.1 Gear3 2L
- + SD 3.0 (UHS-I)

Security

- + Qualcomm® SecureMSM™ technology
- + Qualcomm Haven™ Security Suite
- + Qualcomm® Snapdragon StudioAccess™ content protection

Modem

- + Snapdragon X16 LTE modem
- + Downlink: LTE Cat 16 up to 1 Gbps, 4x20 MHz carrier aggregation, up to 256-QAM
- + Uplink: LTE Cat 13 up to 150 Mbps, Qualcomm® Snapdragon™ Upload+ (2x20 MHz carrier aggregation, up to 64-QAM, uplink data compression)
- + Qualcomm® All Mode with support for all seven cellular modes plus

(Source: from Platform Product Brief downloaded at

<https://www.qualcomm.com/documents/snapdragon-835-mobile-platform-product-brief>)

Frankly, a simple teardown article can't do justice to the amount of technology that has found its way into such a sophisticated machine. This new technology may be a start in trying to turn better profits from the cut-throat consumer TV market, through a combination of higher value and (maybe) a share in the revenue from the streaming services that they enable out of the box.

Here is the list of some of the other silicon that we have catalogued:

Alpha & Omega	AOZ1051PI	Regulator
	AOZ1360AI	Power switch
Alpha Imaging Technology Corp.	AIT8422F	Image processor
Atmel Corporation	ATMLH202	EEPROM
Broadcom	BCM20705A1KWFBG	Bluetooth
	BCM20733A1KFB1G	Bluetooth
Cirque	SD806A	Touch controllers
Conexant	CX20708-21Z	Far Field Voice Input Processor SoC

(Source: <https://web.archive.org/web/20120808103400/http://www.chipworks.com/en/technical-competitive-analysis/resources/recent-teardowns/2012/04/inside-a-samsung-8000-series-smart-tv/>)

CX20708 Super Wideband Voice Input Processor SoC

Complies with Skype Certification requirements for TV solutions

Conexant's CX20708 is industry's first dedicated Super Wideband Voice Input Processor SoC for Telepresence and Speech Recognition applications. This highly integrated SoC features high-fidelity 16-bit ADC, microphone pre-amp, Asynchronous Sample Rate Converter, Sync Buffer, and our award-winning Digital Signal Processor.

The included advanced super-wideband voice processing algorithms deliver a crisp clear, full-duplex, low-latency, audio experience, requiring as little as two matched high-sensitivity unidirectional microphones. The flexible USB and I²S/I²C interfaces

are ideal for integration in the High Definition Camera module or directly inside the Television/ Set-Top-Box.

The CX20708 is a turnkey, single-chip solution that compensates for microphone self-noise, eliminates ambient noise, and maximizes long distance voice pick-up, all without loading the host CPU. This

allows the system designer to achieve a consistent level of voice performance cross software applications and fast to market.

Conexant offers complete an Evaluation Kit (EVK), including the EVK board, data sheet, reference design schematics, AVL, and sample silicon.

Applications

- Telepresence/Unified Communication Device
- Speech Recognition applications

(Source : http://www.datasheetlib.com/datasheet/1416786/cx20708_conexant-systems.html)

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

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

16. The accused products include a command and control speech engine (for example, Bixby, Okay Google, or “Hi TV”) residing in said memory of said DSP chip:

Bixby

Bixby is an assistant that learns from you to help you do more. It responds to voice commands, works with select apps like email and messages, sets reminders, and can help you understand your settings and set up your Samsung devices.

Bixby Talks

Use voice and written commands to interact with Bixby.

Bixby can help you:

- Make a call
- Send a text
- Change your settings
- Find a photo

(Source:

http://downloadcenter.samsung.com/content/UM/201708/20170822043251356/UNL_SM-G955U1_GS8Plus_EN_UM_N_7.0_051817_FINAL_AC.PDF)

Voice Control

You can use only your voice to switch the channel or adjust the volume level while focusing on the TV screen, which removes the need for the conventional remote control.

Menu → System → Voice and Motion Control → Voice Control



- 1 Set **Voice Control** to **On**.
- 2 If you set **Trigger Words** to **Hi TV**, say "Hi TV", and then basic available commands such as **TV Power Off** are displayed on the screen.
- 3 To adjust the volume, simply say "Volume up" or "Volume down".
- 4 To see more commands, say "More Commands".

You can select the **Trigger Words** that start the **Voice Control** function. Alternatively you can turn on your TV using the **Trigger Words** if **Voice Control** function is set to **On**.

- If the **Trigger Words** is set to **Hi TV**, say **Hi TV Power On**.
- If the **Trigger Words** is set to **Smart TV**, say **Smart TV Power On**.

(Source :

http://downloadcenter.samsung.com/content/UM/201203/20120306152130567/ISI_Guide-NAJBN68-04374A-04Eng-0303-1.pdf)

17. 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.

18. 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.

19. 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.

20. Samsung 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.

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

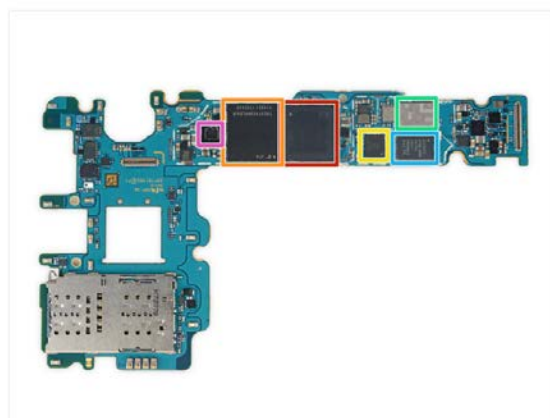
22. The method practiced by the accused products includes inputting speech into an audio input device wherein said audio input device is electrically connected to said computer.

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

24. 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:

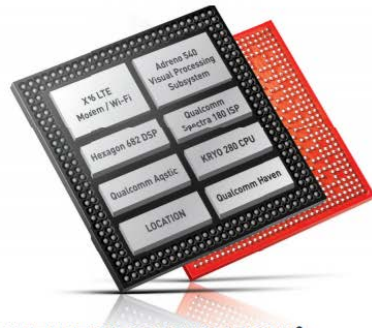
Processor
Processor Speed, Type
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Applications

- Telepresence/Unified Communication Device
- Speech Recognition applications

(Source : http://www.datasheetlib.com/datasheet/1416786/cx20708_conexant-systems.html)

25. 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.

26. 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.

27. 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.

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

Bixby

Bixby is an assistant that learns from you to help you do more. It responds to voice commands, works with select apps like email and messages, sets reminders, and can help you understand your settings and set up your Samsung devices.

Bixby Talks

Use voice and written commands to interact with Bixby.

Bixby can help you:

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- Find a photo

(Source:

http://downloadcenter.samsung.com/content/UM/201708/20170822043251356/UNL_SM-G955U1_GS8Plus_EN_UM_N_7.0_051817_FINAL_AC.PDF)

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- If the **Trigger Words** is set to **Smart TV**, say **Smart TV Power On**.

(Source :

[http://downloadcenter.samsung.com/content/UM/201203/20120306152130567/\[SI_Guide-NA\]BN68-04374A-04Eng-0303-1.pdf](http://downloadcenter.samsung.com/content/UM/201203/20120306152130567/[SI_Guide-NA]BN68-04374A-04Eng-0303-1.pdf))

29. Samsung has had knowledge of the '426 Patent at least as of the date when it was notified of the filing of this action.

30. X-Mobile has been damaged as a result of the infringing conduct by Defendants alleged above. Thus, Defendants are 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.

31. 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

32. 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.”

33. 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.

34. Defendants made, had made, used, imported, provided, supplied, distributed, sold, and/or offered for sale products and/or systems including their Galaxy smartphone, Galaxy Tab tablet, Galaxy Book 2-in-1, and Gear smartwatch families of products (the “accused products”):



(Source: <http://www.samsung.com/us/mobile/phones/galaxy-s/galaxy-s8-plus-64gb--unlocked--sm-g955uzkaxaa/>)



(Source : <http://www.samsung.com/us/mobile/tablets/galaxy-tab-s3/galaxy-tab-s3-9-7---s-pen-included---black-sm-t820nzkaxar/>)



(Source : <http://www.samsung.com/us/explore/galaxy-book/>)



(Source : <http://www.samsung.com/us/mobile/wearable-tech/SM-R7320ZKAXAR>)

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

36. Samsung 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.

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

Sensor Type ?
Type
Accelerometer,Barometer,Fingerprint
Sensor,Gyro Sensor,Geomagnetic
Sensor,Hall Sensor,HR Sensor,Iris
Sensor,Pressure Sensor,Proximity
Sensor,RGB Light Sensor

(Source: <http://www.samsung.com/us/mobile/phones/galaxy-s/galaxy-s8-plus-64gb--unlocked--sm-g955uzkaxaa/#specs>)

Front View



(Source :

http://downloadcenter.samsung.com/content/UM/201703/20170325065936661/WIF_SM-T820_Tab-S3_EN_UM_N_7.0_032417_FINAL.pdf)

Front View



(Source :

http://downloadcenter.samsung.com/content/UM/201705/20170524053953279/WIF_SM-W720_Galaxy_Book_BB_EN_UM_W10_041117_FINAL_AC.PDF)

Sensor Type

TYPE

Accelerometer, Gyroscope, Heart Rate,
Ambient Light, Barometer


(Source : <http://www.samsung.com/us/mobile/wearable-tech/SM-R7320ZKAXAR>)

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

39. 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:

Screen Brightness

Adjust the screen brightness to suit your surroundings or personal preference. You may also want to adjust screen brightness to conserve battery power.

1. From a Home screen, swipe up to access **Apps**.
2. Tap  **Settings** > **Display**.
3. Customize options under Brightness:
 - Drag the **Brightness** slider to set a custom brightness level.
 - Tap **Auto brightness** to automatically adjust the screen brightness based on the lighting conditions.



(Source:

http://downloadcenter.samsung.com/content/UM/201708/20170822043251356/UNL_SM-

[G955U1_GS8Plus_EN_UM_N_7.0_051817_FINAL_AC.PDF](http://downloadcenter.samsung.com/content/UM/201708/20170822043251356/UNL_SM-G955U1_GS8Plus_EN_UM_N_7.0_051817_FINAL_AC.PDF))

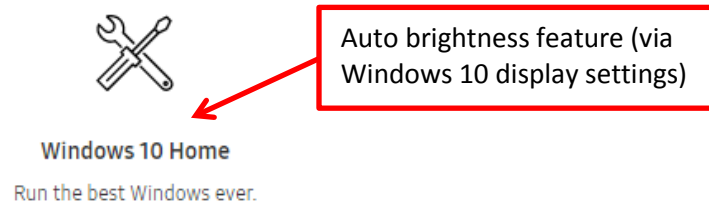
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1. From a Home screen, tap  **Apps** >  **Settings**.
2. Tap **Display**.
3. Customize options under Brightness:
 - Drag the **Brightness** slider to set a custom brightness level.
 - Tap **Auto brightness** to allow the device to adjust brightness automatically.

(Source :

http://downloadcenter.samsung.com/content/UM/201703/20170325065936661/WIF_SM-T820_Tab-S3_EN_UM_N_7.0_032417_FINAL.pdf)



(Source for Windows 10 in Galaxy Book : <http://www.samsung.com/us/explore/galaxy-book/>)

[Samsung](#) has also updated its Digital watch face to give users the ability to set their own background. You can do this by selecting the [Digital face](#) in the Gear Manager app, tapping the "Stylize" button, selecting your Gallery, then choosing your photo.

This update allows the Gear S2 to adjust its own brightness based on ambient light, so it won't be too bright in dark environments, or burn too much power when high brightnesses aren't necessary. It also adds a manual update function in the News Briefing app.

(Source : <http://www.technobuffalo.com/2016/03/20/samsung-gear-s2-update-brings-flight-mode-adaptive-brightness/>)

40. 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.

41. Samsung has had knowledge of the '351 Patent at least as of October 13, 2016, when it was cited by the examiner in an office action during the prosecution of U.S. Patent No. 9,739,855, which was initially assigned to Samsung Electronics Co., Ltd. The '351 Patent served as a reference for a 35 U.S.C. § 103 rejection of pending claims 2 and 24 in that office action, and the applicant responded on January 13, 2017 by distinguishing Wong, characterizing

it as relating “to a computer display optimizer that optimizes a computer display’s internal settings based on sensor information of its surrounding environment (as disclosed in col. 1, lines 49-52).” Samsung employees Gi Tae I, Whoe Sun Yang, and Hye Jeong Lee, who are listed as inventors on U.S. Patent No. 9,739,855, and others involved in the prosecution of that patent have had knowledge of the ‘351 Patent at least as of October 13, 2016.

42. Samsung also has had knowledge of the ‘351 Patent at least as of May 9, 2017, when it was cited by the examiner during the prosecution of U.S. Patent Application No. 14/711,218, titled “Display Apparatus, and Display Control Method and Apparatus of the Display Apparatus” which is assigned to Samsung Display Co., Ltd. Samsung employees Rangkyun Mok, Jongin Baek, Wonsang Park, Yijoon Ahn, and Byeonghee Won, who are listed as inventors in U.S. Patent Application No. 14/711,218, and others involved in the prosecution of that application have had knowledge of the ‘351 Patent at least as of May 9, 2017.

43. X-Mobile has been damaged as a result of the infringing conduct by Defendants alleged above. Thus, Defendants are 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. Defendants made, had made, used, imported, provided, supplied, distributed, sold, and/or offered for sale products and/or systems including their Galaxy smartphone and Galaxy Tab tablet families of products (the “accused products”):



(Source: <http://www.samsung.com/us/mobile/phones/galaxy-s/galaxy-s8-plus-64gb--unlocked--sm-g955uzkaxaa/>)



(Source : <http://www.samsung.com/us/mobile/tablets/galaxy-tab-s3/galaxy-tab-s3-9-7---s-pen-included---black-sm-t820nzkaxar/>)

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

49. Samsung 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:

Bixby

Bixby is an assistant that learns from you to help you do more. It responds to voice commands, works with select apps like email and messages, sets reminders, and can help you understand your settings and set up your Samsung devices.

Bixby Talks

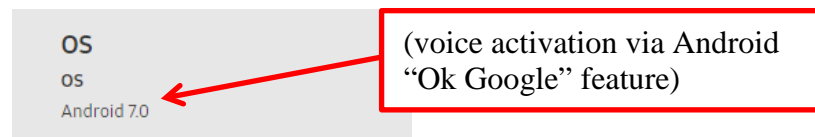
Use voice and written commands to interact with Bixby.

Bixby can help you:

- Make a call
- Send a text
- Change your settings
- Find a photo

(Source:

http://downloadcenter.samsung.com/content/UM/201708/20170822043251356/UNL_SM-G955U1_GS8Plus_EN_UM_N_7.0_051817_FINAL_AC.PDF)



(Source : <http://www.samsung.com/us/mobile/tablets/galaxy-tab-s3/galaxy-tab-s3-9-7---s-pen-included---black-sm-t820nzkaxar/>)

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:



- Samsung got some flak from consumers for reducing battery capacity in last year's S6. It seems they took the hint and made up for it by including this 3000 mAh battery in the S7.
- ⓘ That's a significant boost over the Galaxy S6's 2550 mAh battery, and it even beats the much larger iPhone 6s Plus's 2750 mAh powerplant.
- ⚠ Sadly, as evidenced by this important warning label, the S7's battery does not work in the presence of puppies.
- Although the battery upgrade means more time to binge on apps and games, the battery itself is well wedged and adhered in place, making extraction a little tough.
- If it wasn't designed to be readily removed, then it wasn't intended to be repaired or replaced. Boo.

(Source: <https://www.ifixit.com/Teardown/Samsung%2BGalaxy%2BS7%2BTeardown/56686>)



(Source: <https://www.ifixit.com/Teardown/Samsung%2BGalaxy%2BS7%2BTeardown/56686>)



- The rear glass panel is secured in place by a large amount of adhesive.
- In order to separate the adhesive, the rear panel needs to be heated, pulled up by a suction cup, and split with opening picks.

(Source :

<https://www.ifixit.com/Guide/Samsung+Galaxy+Tab+S3+Repairability+Assessment/87723>)



(Source :

<https://www.ifixit.com/Guide/Samsung+Galaxy+Tab+S3+Repairability+Assessment/87723>)

54. Samsung 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 Defendants alleged above. Thus, Defendants are 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.

COUNT IV

DIRECT INFRINGEMENT OF U.S. PATENT NO. 6,958,905

57. On October 25, 2005, United States Patent No. 6,958,905 (“the ‘905 Patent”) was duly and legally issued by the United States Patent and Trademark Office for an invention entitled “Mobile Body-Supported Computer with Battery.”

58. X-Mobile is the owner of the ‘905 Patent, with all substantive rights in and to that patent, including the sole and exclusive right to prosecute this action and enforce the ‘905 Patent against infringers, and to collect damages for all relevant times.

59. Defendants made, had made, used, imported, provided, supplied, distributed, sold, and/or offered for sale products and/or systems including their Gear S family of products (the “accused products”):



(Source: <http://www.samsung.com/us/mobile/wearable-tech/SM-R750AZKAATT>)

60. By doing so, Defendants have directly infringed (literally and/or under the doctrine of equivalents) at least Claim 14 of the '905 Patent. Defendants' infringement in this regard is ongoing.

61. Samsung has infringed the '905 Patent by making, having made, using, importing, providing, supplying, distributing, selling or offering for sale mobile body supported computers.

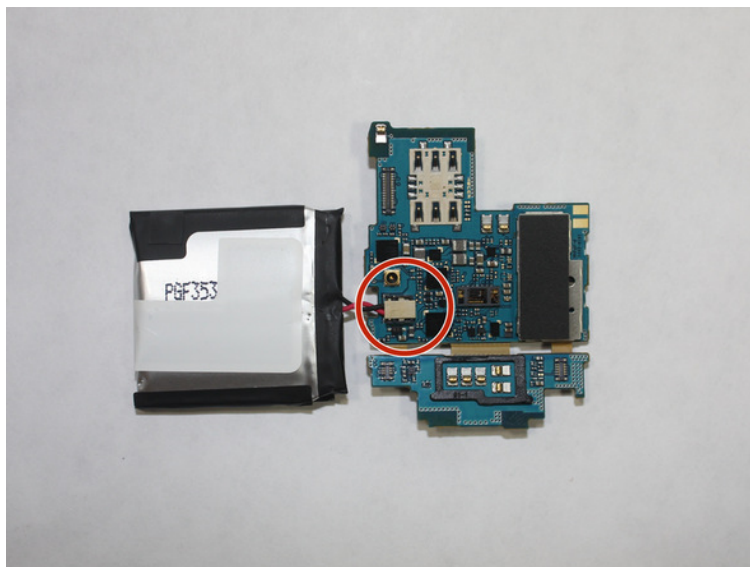
62. The accused products include a computer housing including substantially all components of a conventional computer, with a first surface near a user's body, and a second surface located opposite to the first surface.

63. The accused products include a heat insulating member positioned on at least one of the first surface or the second surface:



(Source: <http://www.samsung.com/us/mobile/wearable-tech/SM-R750AZKAATT>)

64. The accused products include an integral battery with casing, the casing being partially constructed of a thermally non-conducting material:



(Source: <https://www.ifixit.com/Guide/Samsung+Gear+S+Battery-+Motherboard+Replacement/50495>)

65. The accused products include means for activating the computer hands-free:



(Source: <http://www.samsung.com/us/support/gear/gear-s-support/>)

66. The accused products include means for supporting the computer housing by a user.

67. Samsung has had knowledge of the '905 Patent at least as of the date when it was notified of the filing of this action.

68. X-Mobile has been damaged as a result of the infringing conduct by Defendants alleged above. Thus, Defendants are 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.

69. 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 '905 Patent.

ADDITIONAL ALLEGATIONS REGARDING INDIRECT INFRINGEMENT

70. Defendants have also indirectly infringed the '426, '351, '889, and '905 Patents by inducing others to directly infringe the '426, '351, '889, and '905 Patents. Defendants have induced the end-users, Defendants' customers, to directly infringe (literally and/or under the doctrine of equivalents) the '426, '351, '889, and '905 Patents by using the accused products. Defendants 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, claim 1 of the '889 Patent, and claim 14 of the '905 Patent. Such steps by Defendants 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. Defendants performed these steps, which constitute induced infringement, with the knowledge of the '426, '351, '889, and '905 Patents and with the

knowledge that the induced acts would constitute infringement. Defendants were and are aware that the normal and customary use of the accused products by Defendants' customers would infringe the '426, '351, '889, and '905 Patents. Defendants' inducement is ongoing.

71. Defendants have also induced their affiliates, or third-party manufacturers, shippers, distributors, retailers, or other persons acting on their or their affiliates' behalf, to directly infringe (literally and/or under the doctrine of equivalents) the '426, '351, '889, and '905 Patents by importing, selling or offering to sell the accused products. Defendants took active steps, directly and/or through contractual relationships with others, with the specific intent to cause such persons to import, sell, or offer to sell the accused products in a manner that infringes one or more claims of the patents-in-suit, including, for example, claim 1 of the '426 Patent, claim 1 of the '351 Patent, claim 1 of the '889 Patent, and claim 14 of the '905 Patent. Such steps by Defendants included, among other things, making or selling the accused products outside of the United States for importation into or sale in the United States, or knowing that such importation or sale would occur; and directing, facilitating, or influencing their affiliates, or third-party manufacturers, shippers, distributors, retailers, or other persons acting on their or their behalf, to import, sell, or offer to sell the accused products in an infringing manner. Defendants performed these steps, which constitute induced infringement, with the knowledge of the '426, '351, '889, and '905 Patents and with the knowledge that the induced acts would constitute infringement. Defendants performed such steps in order to profit from the eventual sale of the accused products in the United States. Defendants' inducement is ongoing.

72. Defendants have also indirectly infringed by contributing to the infringement of the '426, '351, '889, and '905 Patents. Defendants have contributed to the direct infringement of the '426, '351, '889, and '905 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, '889, and '905 Patents, including, for example, claim 20 of the '426 Patent, claim 1 of the '351 Patent, claim 1 of the '889 Patent, and claim 14 of the '905 Patent. The special features include a DSP with a command and control speech engine 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 and in a manner that infringes the '905 Patent. The special features constitute a material part of the invention of one or more of the claims of the '426, '351, '889, and '905 Patents and are not staple articles of commerce suitable for substantial non-infringing use. Defendants' contributory infringement is ongoing.

73. Defendants also have had knowledge of the '426, '351, '889, and '905 Patents at least as of the date when it was notified of the filing of this action. In addition, as noted above, Defendants have also had knowledge of the '351 Patent as of October 13, 2016 and/or May 9, 2017.

74. Defendants' direct and indirect infringement of the '426, '351, '889, and '905 Patents is, has been, and continues to be willful, intentional, deliberate, and/or in conscious disregard of X-Mobile's rights under the patent.

75. X-Mobile has been damaged as a result of the infringing conduct by Defendants alleged above. Thus, Defendants are 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 Defendants, and that the Court grant X-Mobile the following relief:

- a. Judgment that one or more claims of the '426, '351, '889, & '905 Patents have been infringed, either literally and/or under the doctrine of equivalents, by Defendants and/or all others acting in concert therewith;
- b. A permanent injunction enjoining Defendants and their officers, directors, agents, servants, affiliates, employees, divisions, branches, subsidiaries, parents, and all others acting in concert therewith from infringement of the '426, '351, '889, & '905 Patents; or, in the alternative, an award of a reasonable ongoing royalty for future infringement of the '426, '351, 889 & '905 Patents by such entities;
- c. Judgment that Defendants accounts for and pays to X-Mobile all damages to and costs incurred by X-Mobile because of Defendants' 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 Defendants' 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 31, 2017

Respectfully submitted,

/s/ Zachariah S. Harrington

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CERTIFICATE OF SERVICE

I hereby certify that on the 31st 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