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

SHERMAN DIVISION

INNOVATION SCIENCES, LLC, Plaintiff, v. HTC CORPORATION, Defendant.	**Civil Action No. _____** **JURY TRIAL DEMANDED**

COMPLAINT FOR PATENT INFRINGEMENT

Plaintiff Innovation Sciences, LLC ("Innovation" or "Plaintiff"), for its Complaint against Defendant HTC Corporation ("HTC" or "Defendant"), alleges the following:

NATURE OF THE ACTION

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

THE PARTIES

2. Plaintiff is a corporation organized under the laws of the State of Texas with a place of business at 5800 Legacy Circle, Suite 311, Plano, Texas 75024.

3. Upon information and belief, Defendant HTC is a foreign company organized and existing under the laws of Taiwan, with its principal place of business at 23 Xinghua Road, Taoyuan City, Taoyuan County 330, Taiwan, and can be served at that address. Upon information and belief, HTC sells and offers to sell products and services throughout the United States, including in this judicial district, and introduces products and services into the stream of

commerce and that incorporate infringing technology knowing that they would be sold in this judicial district and elsewhere in the United States.

JURISDICTION AND VENUE

4. This is an action for patent infringement arising under the Patent Laws of the United States, Title 35 of the United States Code.

5. This Court has subject matter jurisdiction under 28 U.S.C. §§ 1331 and 1338(a).

6. Venue is proper in this judicial district pursuant to 28 U.S.C. § 1400(b). HTC is a foreign corporation and may be sued in this judicial district. Venue is further proper because, upon information and belief, HTC has committed acts of infringement in this judicial district, and/or has purposely transacted business involving the accused products in this judicial district.

7. On information and belief, Defendant is subject to this Court's general and specific personal jurisdiction because it has sufficient minimum contacts within the State of Texas and this District, pursuant to due process and/or the Texas Long Arm Statute because Defendant purposefully availed itself of the privileges of conducting business in the State of Texas and in this District, because Defendant regularly conducts and solicits business within the State of Texas and within this District, and because Plaintiff's causes of action arise directly from each of Defendant's business contacts and other activities in the State of Texas and this District.

COUNT I – INFRINGEMENT OF U.S. PATENT NO. 9,912,983

8. The allegations set forth in the foregoing paragraphs 1 through 7 are incorporated into this First Claim for Relief.

9. On March 6, 2018, U.S. Patent No. 9,912,983 ("the '983 patent"), entitled "METHOD AND SYSTEM FOR EFFICIENT COMMUNICATION," was duly and legally

issued by the United States Patent and Trademark Office. A true and correct copy of the '983 patent is attached as Exhibit 1.

10. The inventions of the '983 patent resolve technical problems related to the use of a multi-function wireless hub for information processing. For example, the '983 patent overcomes limitations in the prior art relating to efficiently delivering multimedia information content received over a wireless communication network. Furthermore, the '983 patent overcomes limitations in the prior art relating to providing alerts as to the status of an item over the internet or other next-generation wireless communication network.

11. The inventions allow a user to efficiently set up a system comprising a hub configured to notify a user device of a status update. Furthermore, the inventions of the '983 patent enable a user to pair a variety of sensors to the hub through short-range communications.

12. The claims of the '983 patent recite an invention that is not merely the routine or conventional use of a wireless hub system. Instead, the invention relies on using a network interface and a wireless channel to both decompress a compressed information signal and to communicate information regarding the item status of an item in connection with an updated status of the item. The '983 patent claims thus specify how signals are received and transmitted over both channels to perform both functions.

13. The technology claimed in the '983 patent does not preempt all ways of using wireless hub based decoding or monitoring systems, nor preempt the use of all wireless hub based decoding or monitoring systems, nor preempt any other well-known or prior art technology.

14. Accordingly, each claim of the ’983 patent recites a combination of elements sufficient to ensure that the claim in practice amounts to significantly more than a patent on an ineligible concept.

15. Plaintiff is the assignee and owner of the right, title and interest in and to the ’983 patent, including the right to assert all causes of action arising under said patents and the right to any remedies for infringement of them.

16. Upon information and belief, Defendant has and continues to directly infringe at least claim 62 of the ’983 patent by making, using, offering to sell, selling, importing and/or providing and causing to be used a wireless hub system, including but not limited to the Pixel 2 phone, Exodus 1 phone, and HTC 5G Hub (the “Accused ’983 Instrumentalities”).

17. In particular, claim 62 of the ’983 patent recites a wireless hub system configured to receive, through a wireless communication network and via an input interface, a wireless signal, decompress the signal with a decoder, and convert it for production. The wireless hub system is further configured to communicate information for managing an item status of an item based on a signal regarding an updated status of the item, the signal comprising information corresponding to a unique identifier associated with the item.

18. The Accused ’983 Instrumentalities infringe claim 62 of the ’983 patent, because each of the Accused ’983 Instrumentalities acts as a wireless hub system configured to receive, through a wireless communication network and via an input interface, a wireless signal, decompress the signal with a decoder, and convert it for production. The Accused ’983 Instrumentalities are further configured to communicate information for managing an item status of an item based on a signal regarding an updated status of the item, the signal comprising

information corresponding to a unique identifier associated with the item. Infringement Claim Charts for Claim 62 of the ’983 patent.

19. The Accused ’983 Instrumentalities each include an input interface configured to receive a wireless signal through a wireless communication network. For example, the Accused ’983 Instrumentalities can receive a wireless signal through a Wi-Fi network or a cellular network.

20. The Accused ’983 Instrumentalities each have a decoder. For example, the processors used in the Accused ’983 Instrumentalities have codecs used to decode video and audio signals.

21. The Accused ’983 Instrumentalities support different compressed video and audio formats that are decompressed by the codecs included in the processors for the Accused ’983 Instrumentalities. Examples of compressed audio file formats that can be handled by the Accused ’983 Instrumentalities include one or more of .3gp, .mp4, .m4a, .aac, .ts., .flac, .mp3, .mid, .ogg, .mkv, .wav, and .amr.

22. Examples of compressed video file formats that can be handled by the Accused ’983 Instrumentalities include one or more of .3gp, .mp4, .m4a, .aac, and .ts.

23. The Accused ’983 Instrumentalities each have a network interface configured to provide a communication through a network communication channel. For example, each of the Accused ’983 Instrumentalities can provide a communication through a communication channel established on a Wi-Fi or cellular network.

24. Each of the Accused ’983 Instrumentalities are further configured to communicate, through the network communication channel, information for managing an item status of an item based on a signal regarding an updated status of the item, the signal comprising

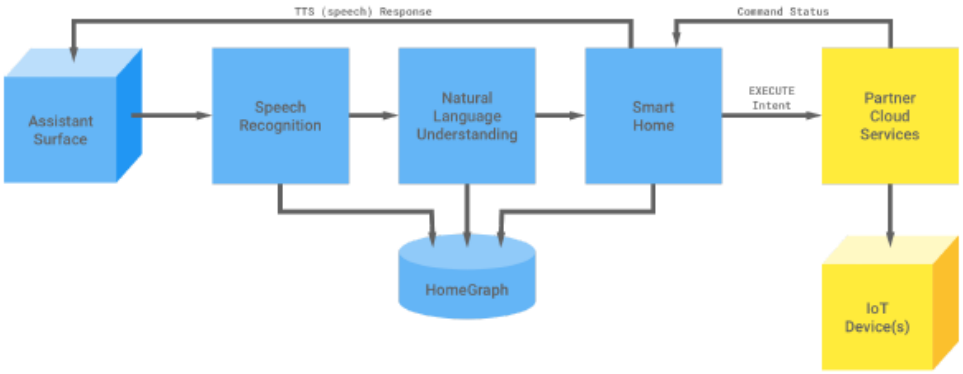
information corresponding to a unique identifier associated with the item. For example, each of the Accused '983 Instrumentalities, using the Google Assistant that comes with it, can control, monitor, or otherwise manage an item status of an item, such as a smart home device. In order to control or monitor an item status of an item, the Accused '983 Instrumentalities are configured to communicate information through a communication channel established on a Wi-Fi connection.

25. For example, using the Google Assistant, the Accused '983 Instrumentalities can receive a voice command from a user to control a smart home device. The Accused '983 Instrumentalities convert the voice command into digital information reflective of the command, which is then sent over Wi-Fi by the Accused '983 Instrumentalities to the Google Assistant cloud. The Google Assistant cloud, in turn, uses the information from the Accused '983 Instrumentalities to compose a message known as an intent. The intent is sent to the smart device management cloud, which in turn tells a hub/bridge in the user's home to control the smart home device to effectuate the action indicated by the voice command.

EXECUTE

The **`action.devices.EXECUTE`** intent is used to provide commands to execute on smart home devices.

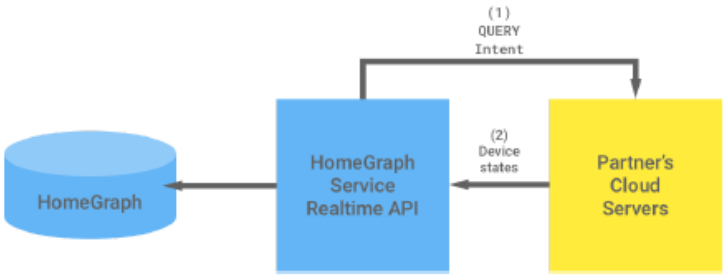
When users send commands to devices with the Google Assistant, your fulfillment receives a **`action.devices.EXECUTE`** intent to your fulfilment that describes the action and the devices to act upon. A user can execute an action on a device with a command such as *Hey Google, turn on my living room lights* .



QUERY

The **`action.devices.QUERY`** intent is used to query the current state of smart home devices.

When users are querying device status, to answer a question such as *Hey Google, what lights are on in the kitchen?*, the Google Assistant sends a **`action.devices.QUERY`** intent to your fulfillment.



For the best user experience, you should implement Report State (https://developers.google.com/actions/smarthome/develop/report-state) to proactively report the current state of a user's devices directly to Home Graph. For example, this lets the Google Assistant know if your user turned on a smart light with a physical light switch.

https://developers.google.com/actions/smarthome/concepts/intents

26. An example of an item whose item status is managed by the Accused '983 Instrumentalities is a Philips Hue lightbulb. Using the Google Assistant, the Accused '983 Instrumentalities can receive a voice command from a user instructing the Accused '983 Instrumentalities to control a Philips Hue lightbulb. For example, the Accused '983 Instrumentalities can instruct the lightbulb to dim to 50%. The Accused '983 Instrumentalities convert the voice command into digital information reflective of the command to dim the lightbulb to 50%, which is then sent over Wi-Fi by the Accused '983 Instrumentalities to the Google Assistant cloud. The Google Assistant cloud, in turn, uses the information from the Accused '983 Instrumentalities to compose a message known as an intent. The intent is sent to the smart device management cloud, which in turn tells a Philips Hue Bridge in the user's home to control the smart home device to effectuate the action indicated by the voice command, in this case dim the lights to 50%. When the Philips Hue lightbulb successfully dims to 50%, it sends a message to the Philips Hue Bridge that the lightbulb was successfully dimmed. Ultimately, the Accused '983 Instrumentalities may receive a message that the lightbulb has now been dimmed to 50% and inform the user via the Google Assistant. When the Accused '983 Instrumentalities receive this message and notify the user, those are examples of communicating information about an updated status of an item.

27. Communicating information about an updated status of an item may occur in response to a query from the user. For example, a user may ask the Google Assistant whether a particular light is on. In response, the device status (e.g., whether the particular light is on) is provided to the user.

> QUERY
>
> The **action.devices.QUERY** intent is used to query the current state of smart home devices.
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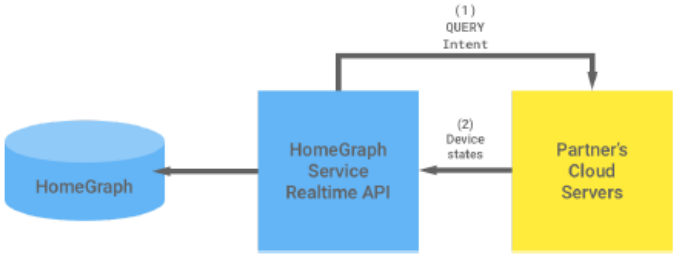
> When users are querying device status, to answer a question such as *Hey Google, what lights are on in the kitchen?*, the Google Assistant sends a **action.devices.QUERY** intent to your fulfillment.



28. Alternatively, a signal actively pushed from a smart home device that indicates the device's current status would qualify as a communication regarding an updated status of the item (for example, a Philips Hue light bulb indicates that the light has been set to 50%).

> For the best user experience, you should implement Report State (https://developers.google.com/actions/smarthome/develop/report-state) to proactively report the current state of a user's devices directly to Home Graph. For example, this lets the Google Assistant know if your user turned on a smart light with a physical light switch.

https://developers.google.com/actions/smarthome/concepts/intents

29. The signal regarding an updated status of the item can be the command sent from the Accused '983 Instrumentalities to the Google Assistant cloud. The command includes a

unique identifier associated with the item being controlled. For example, if a user tells the Google Assistant to dim family room light 2 to 50%, the unique identifier is family room light 2. Alternatively, the signal regarding an updated status of the item can be the intent composed by the Google Assistant cloud. The intent includes a device identifier corresponding to the item to be controlled. The device identifier is a unique identifier associated with the item. In yet another alternative, the signal regarding an updated status of the item can be a signal received by the Accused '983 Instrumentalities reflective of the device state or command state (e.g., as part of the completion of an EXECUTE or QUERY intent, or as part of an effort to proactively report the current state of a device). Such a signal includes a device identifier corresponding to the item whose state is being reported. The device identifier is a unique identifier associated with the item.

30. On information and belief, the Accused '983 Instrumentalities are used, marketed, provided to, and/or used by or for each of Defendant's partners, clients, customers and end users across the country and in this District.

31. Defendant was made aware of the '983 patent and its infringement thereof at least as early as July 5, 2018.

32. Upon information and belief, since at least the time Defendant received notice, Defendant has induced and continues to induce others to infringe at least one claim of the '983 patent under 35 U.S.C. § 271(b) by, among other things, and with specific intent or willful blindness, actively aiding and abetting others to infringe, including but not limited to Defendant's partners, clients, customers, and end users, whose use of the Accused '983 Instrumentalities constitutes direct infringement of at least one claim of the '983 patent.

33. In particular, Defendant's actions that aid and abet others such as its partners, customers, clients, and end users to infringe include advertising and distributing the Accused '983 Instrumentalities and providing instruction materials, training, and services regarding the Accused '983 Instrumentalities. On information and belief, Defendant has engaged in such actions with specific intent to cause infringement or with willful blindness to the resulting infringement because Defendant has had actual knowledge of the '983 patent and knowledge that its acts were inducing infringement of the '983 patent since at least the date Defendant received notice that such activities infringed the '983 patent.

34. Upon information and belief, Defendant is liable as a contributory infringer of the '983 patent under 35 U.S.C. § 271(c) by offering to sell, selling and importing into the United States wireless hub systems to be especially made or adapted for use in an infringement of the '983 patent. The Accused '983 Instrumentalities are a material component for use in practicing the '983 patent and are specifically made and are not a staple article of commerce suitable for substantial non-infringing use.

35. Since at least July 5, 2018, Defendant's infringement has been willful.

36. Plaintiff has been harmed by Defendant's infringing activities.

COUNT II – INFRINGEMENT OF U.S. PATENT NO. 9,942,798

37. The allegations set forth in the foregoing paragraphs 1 through 36 are incorporated into this Second Claim for Relief.

38. On April 10, 2018, U.S. Patent No. 9,942,798 ("the '798 patent"), entitled "METHOD AND SYSTEM FOR EFFICIENT COMMUNICATION," was duly and legally issued by the United States Patent and Trademark Office. A true and correct copy of the '798 patent is attached as Exhibit 2.

39. The inventions of the ’798 patent resolve technical problems related to the use of a multi-function wireless hub and management system for information processing. For example, the ’798 patent overcomes limitations in the prior art relating to efficiently delivering multimedia information content received over a wireless communication network. Furthermore, the ’798 patent overcomes limitations in the prior art relating to managing alerts as to a status of an item over the internet or other next-generation wireless communication network.

40. The inventions of the ’798 patent allow a user to efficiently set up a system comprising a hub and management center system to communicate with each other to facilitate retrieval of a compressed information content requested from the hub and production by a digital television. Furthermore, the inventions of the ’798 patent enable a user to pair a variety of wireless hubs with a variety of management center systems to provide increased cross-platform compatibility.

41. The inventions of the ’798 patent allow a user to efficiently set up a system comprising a hub and one or more sensors capable of sensing the status of an item, such that the hub can detect which of the plurality of sensors has sensed an updated status and notify a user device accordingly. Furthermore, the inventions of the ’798 patent enable a user to pair a variety of sensors supporting a wide range of short-range communications to provide increased compatibility with the hub.

42. The claims of the ’798 patent recite an invention that is not merely the routine or conventional use of a wireless hub or management center system. Instead, the invention relies on using a network interface and a wireless channel to both decompress a compressed information signal and to communicate information regarding the item status of an item in

connection with an updated status of the item. The ’798 patent claims thus specify how signals are received and transmitted over both channels to perform both functions.

43. The technology claimed in the ’798 patent does not preempt all ways of using wireless hub based decoding or monitoring systems, nor preempt the use of all wireless hub based decoding or monitoring systems, nor preempt any other well-known or prior art technology.

44. Accordingly, each claim of the ’798 patent recites a combination of elements sufficient to ensure that the claim in practice amounts to significantly more than a patent on an ineligible concept.

45. Plaintiff is the assignee and owner of the right, title and interest in and to the ’798 patent, including the right to assert all causes of action arising under said patents and the right to any remedies for infringement of them.

46. Upon information and belief, Defendant has and continues to directly infringe at least claim 1 of the ’798 patent by making, using, offering to sell, selling, importing and/or providing and causing to be used a wireless apparatus, including but not limited to the Exodus 1 phone and HTC 5G Hub (the “Accused ’798 Instrumentalities”).

47. In particular, claim 1 of the ’798 patent recites a management system comprising a centralized hub system, further comprising an encoder and decoder, wherein the hub system is configured to receive an compressed signal for a requested information content over a wireless network, decompress it, and encode the decompressed signal for transmission over a high definition digital output interface to accommodate production the requested information content on a high definition digital television. The hub system is further configured to communicate

information for managing an item status of a household item in connection with a short range wireless communication regarding an updated status of the item.

48. The Accused ’798 Instrumentalities infringe claim 1 of the ’798 patent.

49. The Accused ’798 Instrumentalities each have a decoder. For example, the processors used in the Accused ’798 Instrumentalities have codecs used to encode or decode video signals. Infringement Claim Charts for Claim 1 of the ’798 patent.

50. The Accused ’798 Instrumentalities support different compressed video and audio formats that are decompressed by the codecs included in the processors for the Accused ’798 Instrumentalities. Examples of compressed video file formats that can be handled by the Accused ’798 Instrumentalities include one or more of .3gp, .mp4, .m4a, .aac, and .ts.

51. The Accused ‘798 Instrumentalities are each associated with a unique identifier that is stored in at least one mapping table. For example, a particular HTC 5G Hub or Exodus 1 has an IMEI (International Mobile Equipment Identity) code that uniquely identifies it. The IMEI code is stored in a mapping table that associates the IMEI code, with, among other things, an IP address for the particular HTC 5G Hub or Exodus 1. A HTC 5G Hub or Exodus 1 also has an IP address. The IP address is stored in a mapping table that associates the IP address with, among other things, an IMEI code for the particular HTC 5G Hub or Exodus 1. In addition, the HTC 5G Hub or Exodus 1 is associated with a unique identifier (such as a device name, IMEI, device serial number, phone number, IP address, or and/or user account identification information) that is stored in a mapping table (stored on the HTC 5G Hub or Exodus 1 or the Google cloud) that maintains mappings between a Google account identifier and the various device identifiers.

52. Furthermore, the Accused '798 Instrumentalities execute video streaming apps, such as Netflix. (See, e.g., https://help.netflix.com/en/node/23939.) When a user streams video (e.g., Netflix, Amazon Prime Video, etc.), the Accused '798 Instrumentalities wirelessly receive information content (e.g., video stream data). The information content is requested by the user because the user selects what video to watch. The request is made in connection with identifying the unique identifier of the Accused '798 Instrumentalities, so that the video stream packets can be successfully delivered. The video stream is a compressed digital video signal, such as .3gp, .mp4, .m4a, .aac, or .ts.

53. The Accused '798 Instrumentalities decompress the received compressed video signal to a decompressed digital video signal. For example, because the streamed video is displayed on the Accused '798 Instrumentalities, the Accused '798 Instrumentalities decompresses the received compressed digital video (e.g. .3gp, .mp4, .m4a, .aac, or .ts) signal to a decompressed video signal that is shown on the screen of the Accused '798 Instrumentalities.

54. The Accused '798 Instrumentalities can encode the decompressed digital video signal to produce an encoded decompressed digital video signal for transmission through a high definition digital output interface to accommodate production of the information content on a high definition digital television. For example, the Accused '798 Instrumentalities can send the encoded decompressed high definition video signals to a high definition digital television using a USB-C to HDMI adapter. Because HDMI video signals are uncompressed signals, when the Accused '798 Instrumentalities send video signals to a TV or monitor via a USB-C to HDMI adaptor, it is sending decompressed high definition video signals. Before sending the decompressed video signals to a TV or monitor via a USB-C to HDMI adaptor, the Accused

‘798 Instrumentalities encode the signals for transmission to the destination device using, for example, DisplayPort encoding.

55. The Accused ‘798 Instrumentalities also communicate information for managing a household item status of a household item in conjunction with a short range wireless communication regarding an updated status of the household item, the short range wireless communication comprising a wireless signal, the wireless signal comprising information corresponding to a unique identifier associated with the household item. For example, each of the Accused ’798 Instrumentalities, using the Google Assistant that comes with it, can control, monitor, or otherwise manage an item status of an item, such as a smart home device. In order to control or monitor an item status of an item, the Accused ’798 Instrumentalities are configured to communicate information through a communication channel established on a Wi-Fi connection.

56. For example, using the Google Assistant, the Accused ’798 Instrumentalities can receive a voice command from a user to control a smart home device. The Accused ’798 Instrumentalities convert the voice command into digital information reflective of the command, which is then sent over Wi-Fi by the Accused ’798 Instrumentalities to the Google Assistant cloud. The Google Assistant cloud, in turn, uses the information from the Accused ’798 Instrumentalities to compose a message known as an intent. The intent is sent to the smart device management cloud, which in turn tells a hub/bridge in the user’s home to control the smart home device to effectuate the action indicated by the voice command.

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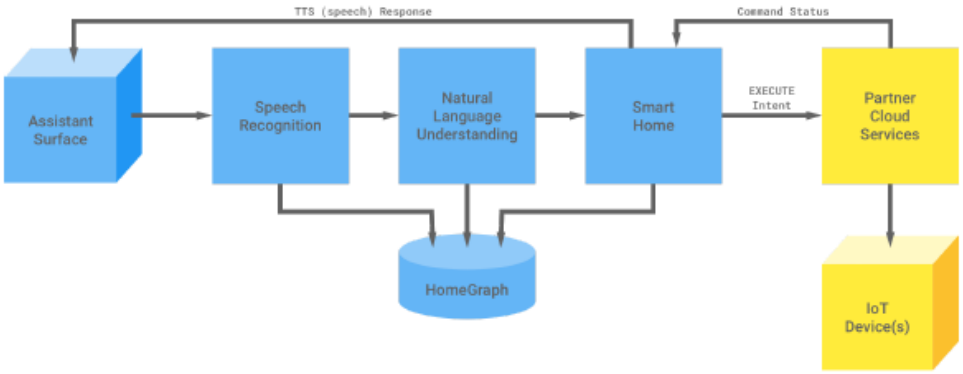
The **`action.devices.EXECUTE`** intent is used to provide commands to execute on smart home devices.

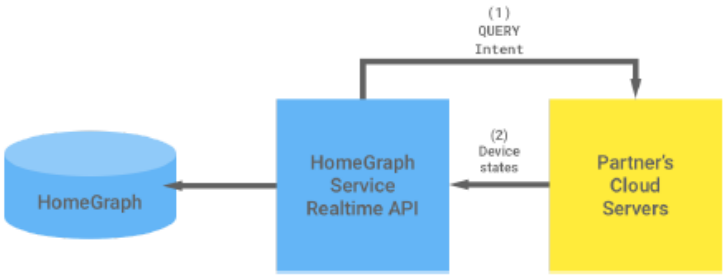
When users send commands to devices with the Google Assistant, your fulfillment receives a **`action.devices.EXECUTE`** intent to your fulfilment that describes the action and the devices to act upon. A user can execute an action on a device with a command such as *Hey Google, turn on my living room lights* .



QUERY

The **`action.devices.QUERY`** intent is used to query the current state of smart home devices.

When users are querying device status, to answer a question such as *Hey Google, what lights are on in the kitchen?*, the Google Assistant sends a **`action.devices.QUERY`** intent to your fulfillment.



For the best user experience, you should implement Report State (https://developers.google.com/actions/smarthome/develop/report-state) to proactively report the current state of a user's devices directly to Home Graph. For example, this lets the Google Assistant know if your user turned on a smart light with a physical light switch.

https://developers.google.com/actions/smarthome/concepts/intents

57. An example of an item whose item status is managed by the Accused '798 Instrumentalities is a Philips Hue lightbulb. Using the Google Assistant, the Accused '798 Instrumentalities can receive a voice command from a user instructing the Accused '798 Instrumentalities to control a Philips Hue lightbulb. For example, the Accused '798 Instrumentalities can instruct the lightbulb to dim to 50%. The Accused '798 Instrumentalities convert the voice command into digital information reflective of the command to dim the lightbulb to 50%, which is then sent over Wi-Fi by the Accused '798 Instrumentalities to the Google Assistant cloud. The Google Assistant cloud, in turn, uses the information from the Accused '798 Instrumentalities to compose a message known as an intent. The intent is sent to the smart device management cloud, which in turn tells a Philips Hue Bridge in the user's home to control the smart home device to effectuate the action indicated by the voice command, in this case dim the lights to 50%. When the Philips Hue lightbulb successfully dims to 50%, it sends a message to the Philips Hue Bridge that the lightbulb was successfully dimmed. Ultimately, the Accused '798 Instrumentalities may receive a message that the lightbulb has now been dimmed to 50% and inform the user via the Google Assistant. When the Accused '798 Instrumentalities receive this message and notify the user, those are examples of communicating information about an updated status of an item.

58. Communicating information about an updated status of an item may occur in response to a query from the user. For example, a user may ask the Google Assistant whether a particular light is on. In response, the device status (e.g., whether the particular light is on) is provided to the user.

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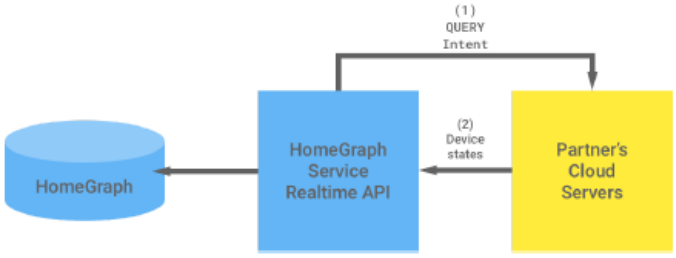


59. Alternatively, a signal actively pushed from a smart home device that indicates the device's current status would qualify as a communication regarding an updated status of the item (for example, a Philips Hue light bulb indicates that the light has been set to 50%).

> For the best user experience, you should implement Report State (https://developers.google.com/actions/smarthome/develop/report-state) to proactively report the current state of a user's devices directly to Home Graph. For example, this lets the Google Assistant know if your user turned on a smart light with a physical light switch.

https://developers.google.com/actions/smarthome/concepts/intents

60. The signal regarding an updated status of the item can be the command sent from the Accused '798 Instrumentalities to the Google Assistant cloud. The command includes a

unique identifier associated with the item being controlled. For example, if a user tells the Google Assistant to dim family room light 2 to 50%, the unique identifier is family room light 2. Alternatively, the signal regarding an updated status of the item can be the intent composed by the Google Assistant cloud. The intent includes a device identifier corresponding to the item to be controlled. The device identifier is a unique identifier associated with the item. In yet another alternative, the signal regarding an updated status of the item can be a signal received by the Accused '798 Instrumentalities reflective of the device state or command state (e.g., as part of the completion of an EXECUTE or QUERY intent, or as part of an effort to proactively report the current state of a device). Such a signal includes a device identifier corresponding to the item whose state is being reported. The device identifier is a unique identifier associated with the item.

61. When the smart home devices controlled or monitored by the Accused '798 Instrumentalities are devices controlled or monitored over a short range wireless communication via Zigbee or Z-Wave, etc., the Accused '798 Instrumentalities communicate information about an updated status of a household item in conjunction with a short range wireless communication regarding the updated status.

62. On information and belief, the Accused '798 Instrumentalities are used, marketed, provided to, and/or used by or for each of Defendant's partners, clients, customers and end users across the country and in this District.

63. Defendant was made aware of the '798 patent and its infringement thereof at least as early as July 5, 2018.

64. Upon information and belief, since at least the time Defendant received notice, Defendant has induced and continues to induce others to infringe at least one claim of the '798

patent under 35 U.S.C. § 271(b) by, among other things, and with specific intent or willful blindness, actively aiding and abetting others to infringe, including but not limited to Defendant's partners, clients, customers, and end users, whose use of the Accused Instrumentalities constitutes direct infringement of at least one claim of the '798 patent.

65. In particular, Defendant's actions that aid and abet others such as its partners, customers, clients, and end users to infringe include advertising and distributing the Accused Instrumentalities and providing instruction materials, training, and services regarding the Accused Instrumentalities. On information and belief, Defendant has engaged in such actions with specific intent to cause infringement or with willful blindness to the resulting infringement because Defendant has had actual knowledge of the '798 patent and knowledge that its acts were inducing infringement of the '798 patent since at least the date Defendant received notice that such activities infringed the '798 patent.

66. Upon information and belief, Defendant is liable as a contributory infringer of the '798 patent under 35 U.S.C. § 271(c) by offering to sell, selling and importing into the United States management systems and centralized hub systems to be especially made or adapted for use in infringement of the '798 patent. The Accused Instrumentalities are a material component for use in practicing the '798 patent and are specifically made and are not a staple article of commerce suitable for substantial non-infringing use.

67. Since at least July 5, 2018, Defendant's infringement has been willful.

68. Plaintiff has been harmed by Defendant's infringing activities.

COUNT III – INFRINGEMENT OF U.S. PATENT NO. 9,729,918

69. The allegations set forth in the foregoing paragraphs 1 through 68 are incorporated into this Third Claim for Relief.

70. On August 8, 2017, U.S. Patent No. 9,729,918 ("the '918 patent"), entitled "METHOD AND SYSTEM FOR EFFICIENT COMMUNICATION," was duly and legally issued by the United States Patent and Trademark Office. A true and correct copy of the '918 patent is attached as Exhibit 3.

71. The inventions of the '918 patent resolve technical problems related to the use of a mobile wireless device for processing multimedia content. For example, the '918 patent overcomes limitations in the prior art relating to efficiently delivering multimedia information content received over a wireless communication network to a destination device.

72. The inventions allow a user to efficiently set up a wireless device to accommodate production of a received multimedia content on a destination device such as a digital television over a high definition output interface. Furthermore, the inventions of the '918 patent enable a user to pair a variety of wireless devices with a variety of destination devices for viewing the multimedia content.

73. The inventions of the '918 patent also allow a user to set up a system capable of communicating information about an updated status of an item in conjunction with a short range wireless communication regarding the updated status. Furthermore, the inventions of the '918 patent enable a user to pair a variety of sensors supporting a wide range of short-range communications to provide increased compatibility with the hub.

74. The claims of the '918 patent recite an invention that is not merely the routine or conventional use of a mobile wireless device or digital television. Instead, the invention relies on using a decoder and encoder to efficiently decompress received digital video signals and encode them as appropriate for the destination device, and to communicate information

regarding the item status of an item in connection with an updated status of the item. The ’918 patent claims thus specify how signals are received and transmitted to perform these functions.

75. The technology claimed in the ’918 patent does not preempt all ways of using mobile wireless devices, digital output interfaces, or digital televisions for digital video processing, nor preempt the use of all mobile wireless video processing systems, nor preempt any other well-known or prior art technology.

76. Accordingly, each claim of the ’918 patent recites a combination of elements sufficient to ensure that the claim in practice amounts to significantly more than a patent on an ineligible concept.

77. Plaintiff is the assignee and owner of the right, title and interest in and to the ’918 patent, including the right to assert all causes of action arising under said patents and the right to any remedies for infringement of them.

78. Upon information and belief, Defendant has and continues to directly infringe at least claim 111 of the ’918 patent by making, using, offering to sell, selling, importing and/or providing and causing to be used a wireless apparatus, including but not limited the Pixel 2 phone, Exodus 1 phone, and HTC 5G Hub (the “Accused ’918 Instrumentalities”).

79. In particular, claim 99 of the ’918 patent recites a wireless signal conversion apparatus configured to receive a compressed multimedia signal, decompress the digital signal by a decoder for production, and further encode the decompressed signal by an encoder to an encoded signal, and wherein the apparatus is configured to transmit the encoded signal to a destination device (i.e., a digital television) through a predetermined channel (i.e., a high definition digital output interface) in conjunction with a navigational command.

80. Claim 111, which is dependent on claim 99, further requires the apparatus to communicate information about an updated status of a household item in conjunction with a short range wireless communication regarding the updated status.

81. The Accused ’918 Instrumentalities each have a processor and memory, where the memory stores program code executable to perform certain operations. For example, the Accused ’918 Instrumentalities each include Qualcomm processors and associated memory. Infringement Claim Charts for Claims 99 and 111 of the ’918 patent.

82. The Accused ’918 Instrumentalities are operable to receive, through a wireless communication network, a multimedia signal, the multimedia signal comprising a compressed digital video signal. For example, the Accused ’918 Instrumentalities can receive a wireless signal through a Wi-Fi network or a cellular network. The Accused ’918 Instrumentalities support different compressed video format that are decompressed by the codecs included in the processors for the Accused ’918 Instrumentalities. Examples of compressed video file formats that can be handled by the Accused ’918 Instrumentalities include one or more of .3gp, .mp4, .m4a, .aac, and .ts. Furthermore, the Accused ‘918 Instrumentalities execute video streaming apps, such as Netflix. (See, e.g., https://help.netflix.com/en/node/23939.) When a user streams video (e.g., Netflix, Amazon Prime Video, etc.), the Accused ‘918 Instrumentalities wirelessly receive information content (e.g., video stream data). The video stream is a compressed digital video signal, such as .3gp, .mp4, .m4a, .aac, or .ts.

83. The Accused ‘918 Instrumentalities decompress the received compressed video signal to a decompressed digital video signal. For example, because the streamed video is displayed on the Accused ‘918 Instrumentalities, the Accused ‘918 Instrumentalities

decompresses the received compressed digital video (e.g. .3gp, .mp4, .m4a, .aac, or .ts) signal to a decompressed video signal that is shown on the screen of the Accused '918 Instrumentalities.

84. The Accused '918 Instrumentalities can encode the decompressed digital video signal to produce an encoded signal for transmission through a predetermined communication channel to accommodate production of the video on a destination device, such as high definition digital television. For example, the Accused '918 Instrumentalities can send the video content to a high definition digital television using the Accused '918 Instrumentalities' screen mirroring or Cast feature to wirelessly stream the video. An exemplary navigational command for the predetermined communication channel is the action of tapping the device where the user wants the Accused '918 Instrumentalities' screen shown, which initiates the wireless transfer of signals from the Accused '918 Instrumentalities to the high definition digital television.

85. Alternatively, some of the Accused '918 Instrumentalities (specifically, the Exodus 1 and HTC 5G Hub) can send the converted high definition video signal to a high definition digital television using a USB-C to HDMI adapter. When a user of an Exodus 1 or HTC 5G Hub uses the device's user interface to start playing a video while a USB-C to HDMI adaptor is connected, the Exodus 1 or HTC 5G Hub responds by transmitting the video (encoded signal) to the destination device (TV or monitor) through a predetermined communication channel (USB-C port, USB-C to HDMI adaptor, and HDMI cable) in conjunction with a navigational command (user, for example, presses "play" on the user interface) for the predetermined communication channel. Before sending the decompressed video signals to a TV or monitor via a USB-C to HDMI adaptor, the Exodus 1 or HTC 5G Hub encodes the signals for transmission to the destination device using, for example, DisplayPort encoding.

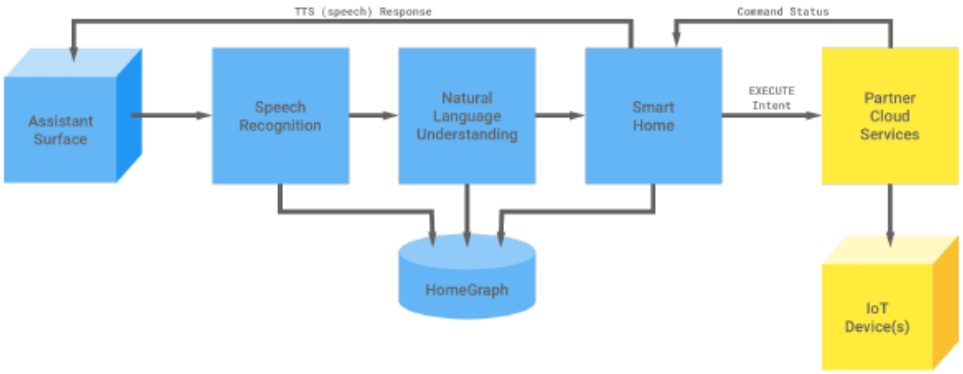
86. The Accused ‘918 Instrumentalities also communicate information about an updated status of a household item status in conjunction with a short range wireless communication regarding an updated status of the household item. For example, each of the Accused ’918 Instrumentalities, using the Google Assistant that comes with it, can control, monitor, or otherwise manage an item status of an item, such as a smart home device. In order to control or monitor an item status of an item, the Accused ’918 Instrumentalities are configured to communicate information through a communication channel established on a Wi-Fi connection.

87. For example, using the Google Assistant, the Accused ’918 Instrumentalities can receive a voice command from a user to control a smart home device. The Accused ’918 Instrumentalities convert the voice command into digital information reflective of the command, which is then sent over Wi-Fi by the Accused ’918 Instrumentalities to the Google Assistant cloud. The Google Assistant cloud, in turn, uses the information from the Accused ’918 Instrumentalities to compose a message known as an intent. The intent is sent to the smart device management cloud, which in turn tells a hub/bridge in the user’s home to control the smart home device to effectuate the action indicated by the voice command.

EXECUTE

The **`action.devices.EXECUTE`** intent is used to provide commands to execute on smart home devices.

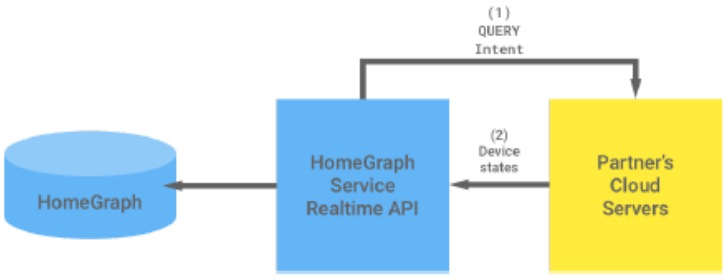
When users send commands to devices with the Google Assistant, your fulfillment receives a **`action.devices.EXECUTE`** intent to your fulfilment that describes the action and the devices to act upon. A user can execute an action on a device with a command such as *Hey Google, turn on my living room lights* .



QUERY

The **`action.devices.QUERY`** intent is used to query the current state of smart home devices.

When users are querying device status, to answer a question such as *Hey Google, what lights are on in the kitchen?*, the Google Assistant sends a **`action.devices.QUERY`** intent to your fulfillment.



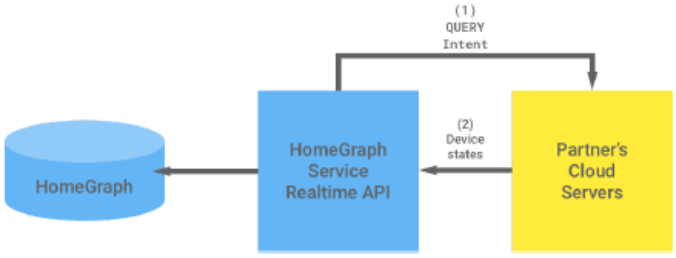
For the best user experience, you should implement Report State (https://developers.google.com/actions/smarthome/develop/report-state) to proactively report the current state of a user's devices directly to Home Graph. For example, this lets the Google Assistant know if your user turned on a smart light with a physical light switch.

https://developers.google.com/actions/smarthome/concepts/intents

88. An example of an item whose item status is managed by the Accused '918 Instrumentalities is a Philips Hue lightbulb. Using the Google Assistant, the Accused '918 Instrumentalities can receive a voice command from a user instructing the Accused '918 Instrumentalities to control a Philips Hue lightbulb. For example, the Accused '918 Instrumentalities can instruct the lightbulb to dim to 50%. The Accused '918 Instrumentalities convert the voice command into digital information reflective of the command to dim the lightbulb to 50%, which is then sent over Wi-Fi by the Accused '918 Instrumentalities to the Google Assistant cloud. The Google Assistant cloud, in turn, uses the information from the Accused '918 Instrumentalities to compose a message known as an intent. The intent is sent to the smart device management cloud, which in turn tells a Philips Hue Bridge in the user's home to control the smart home device to effectuate the action indicated by the voice command, in this case dim the lights to 50%. When the Philips Hue lightbulb successfully dims to 50%, it sends a message to the Philips Hue Bridge that the lightbulb was successfully dimmed. Ultimately, the Accused '918 Instrumentalities may receive a message that the lightbulb has now been dimmed to 50% and inform the user via the Google Assistant. When the Accused '918 Instrumentalities receive this message and notify the user, those are examples of communicating information about an updated status of an item.

89. Communicating information about an updated status of an item may occur in response to a query from the user. For example, a user may ask the Google Assistant whether a particular light is on. In response, the device status (e.g., whether the particular light is on) is provided to the user.

> QUERY
>
> The **action.devices.QUERY** intent is used to query the current state of smart home devices.
>
> When users are querying device status, to answer a question such as *Hey Google, what lights are on in the kitchen?*, the Google Assistant sends a **action.devices.QUERY** intent to your fulfillment.



90. Alternatively, a signal actively pushed from a smart home device that indicates the device's current status would qualify as a communication regarding an updated status of the item (for example, a Philips Hue light bulb indicates that the light has been set to 50%).

> For the best user experience, you should implement Report State (https://developers.google.com/actions/smarthome/develop/report-state) to proactively report the current state of a user's devices directly to Home Graph. For example, this lets the Google Assistant know if your user turned on a smart light with a physical light switch.

https://developers.google.com/actions/smarthome/concepts/intents

91. The signal regarding an updated status of the item can be the command sent from the Accused '918 Instrumentalities to the Google Assistant cloud. The command includes a

unique identifier associated with the item being controlled. For example, if a user tells the Google Assistant to dim family room light 2 to 50%, the unique identifier is family room light 2. Alternatively, the signal regarding an updated status of the item can be the intent composed by the Google Assistant cloud. The intent includes a device identifier corresponding to the item to be controlled. The device identifier is a unique identifier associated with the item. In yet another alternative, the signal regarding an updated status of the item can be a signal received by the Accused '798 Instrumentalities reflective of the device state or command state (e.g., as part of the completion of an EXECUTE or QUERY intent, or as part of an effort to proactively report the current state of a device). Such a signal includes a device identifier corresponding to the item whose state is being reported. The device identifier is a unique identifier associated with the item.

92. When the smart home devices controlled or monitored by the Accused '918 Instrumentalities are devices controlled or monitored over a short range wireless network such as Zigbee or Z-Wave, etc., the Accused '918 Instrumentalities communicate information about an updated status of a household item in conjunction with a short range wireless communication regarding the updated status.

93. On information and belief, the Accused Instrumentalities are used, marketed, provided to, and/or used by or for each of Defendant's partners, clients, customers and end users across the country and in this District.

94. Defendant was made aware of the '918 patent and its infringement thereof at least as early as August 8, 2017.

95. Upon information and belief, since at least the time Defendant received notice, Defendant has induced and continues to induce others to infringe at least one claim of the '918

patent under 35 U.S.C. § 271(b) by, among other things, and with specific intent or willful blindness, actively aiding and abetting others to infringe, including but not limited to Defendant's partners, clients, customers, and end users, whose use of the Accused Instrumentalities constitutes direct infringement of at least one claim of the '918 patent.

96. In particular, Defendant's actions that aid and abet others such as its partners, customers, clients, and end users to infringe include advertising and distributing the Accused Instrumentalities and providing instruction materials, training, and services regarding the Accused Instrumentalities. On information and belief, Defendant has engaged in such actions with specific intent to cause infringement or with willful blindness to the resulting infringement because Defendant has had actual knowledge of the '918 patent and knowledge that its acts were inducing infringement of the '918 patent since at least the date Defendant received notice that such activities infringed the '918 patent.

97. Upon information and belief, Defendant is liable as a contributory infringer of the '918 patent under 35 U.S.C. § 271(c) by offering to sell, selling and importing into the United States wireless mobile devices to be especially made or adapted for use in an infringement of the '918 patent. The Accused Instrumentalities are a material component for use in practicing the '918 patent and are specifically made and are not a staple article of commerce suitable for substantial non-infringing use.

98. Since at least August 8, 2017, Defendant's infringement has been willful.

99. Plaintiff has been harmed by Defendant's infringing activities.

JURY DEMAND

Pursuant to Rule 38 of the Federal Rules of Civil Procedure, Plaintiff demands a trial by jury on all issues triable as such.

PRAYER FOR RELIEF

WHEREFORE, Plaintiff demands judgment for itself and against Defendant as follows:

A. An adjudication that Defendant has infringed the ’983, ’798, and ’918 patents;

B. An award of damages to be paid by Defendant adequate to compensate Plaintiff for Defendant’s past infringement of the ’983, ’798, and ’918 patents and any continuing or future infringement through the date such judgment is entered, including interest, costs, expenses and an accounting of all infringing acts including, but not limited to, those acts not presented at trial;

C. A declaration that this case is exceptional under 35 U.S.C. § 285, and an award of Plaintiff’s reasonable attorneys’ fees; and

D. An award to Plaintiff of such further relief at law or in equity as the Court deems just and proper.

Dated: October 15, 2019

Respectfully submitted,

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