

**IN THE UNITED STATES DISTRICT COURT
FOR THE DISTRICT OF DELAWARE**

DALE PROGRESS LTD.,

Plaintiff,

v.

GENERAL MOTORS LLC,

Defendant.

CIVIL ACTION NO. 1:19-cv-00257-RGA

PATENT CASE

JURY TRIAL DEMANDED

**FIRST AMENDED COMPLAINT
FOR PATENT INFRINGEMENT AGAINST GENERAL MOTORS LLC**

Plaintiff Dale Progress Ltd. (“Plaintiff”), by and through its undersigned counsel, files this First Amended Complaint against Defendant General Motors LLC (“Defendant”) as follows:

NATURE OF THE ACTION

1. This is an action for violation of 35 U.S.C. §§ 271(a) and 35 U.S.C. §§ 271(b). This is a patent infringement action to stop Defendant’s infringement of United States Patent No. 9,686,504 (“the ‘504 patent”) entitled “Remote Resource Access Interface Apparatus” and the United States Patent No. 8,320,461 (“the ‘461 patent”) entitled “Remote Resource Access Interface Apparatus”. A true and correct copy of the ‘504 patent is attached hereto as Exhibit A. A true and correct copy of the ‘461 patent is attached hereto as Exhibit B. Plaintiff is the owner by assignment of the ‘504 and ‘461 patents. Plaintiff seeks monetary damages and injunctive relief.

PARTIES

2. Plaintiff is a limited liability company having a principal place of business located at #204(#-81), 83, Gasan digital 1-ro, Gasan-Dong Geumcheon-gu, Seoul, 08589, Republic of Korea.

3. Upon information and belief, Defendant is a corporation organized and existing under the laws of the State of Delaware with a principal place of business located at 300 Renaissance Center, Detroit, MI 48265. Defendant can be served with process by serving Corporation Service Company, 251 Little Falls Drive, Wilmington, DE 19808.

JURISDICTION AND VENUE

4. This action arises under the Patent Laws of the United States, 35 U.S.C. § 1 *et seq.*, including 35 U.S.C. §§ 271, 281, 283, 284, and 285.

5. This Court has subject matter jurisdiction over this case for patent infringement under 28 U.S.C. §§ 1331 and 1338(a).

6. The Court has personal jurisdiction over Defendant because: Defendant is present within or has minimum contacts within the State of Delaware and the District of Delaware; Defendant has purposefully availed itself of the privileges of conducting business in the State of Delaware and in the District of Delaware; Defendant has sought protection and benefit from the laws of the State of Delaware; Defendant regularly conducts business within the State of Delaware and within the District of Delaware; and Plaintiff's cause of action arises directly from Defendant's business contacts and other activities in the State of Delaware and in the District of Delaware. Further, this Court has personal jurisdiction over Defendant because it is incorporated in Delaware and has purposely availed itself of the privileges and benefits of the laws of the State of Delaware.

7. More specifically, Defendant, directly and/or through intermediaries, ships, distributes, uses, offers for sale, sells, and/or advertises products and services in the United States, the State of Delaware, and the District of Delaware including but not limited to the Accused Instrumentalities as detailed below. Upon information and belief, Defendant has committed patent infringement in the State of Delaware and in the District of Delaware. Defendant solicits and has

solicited customers in the State of Delaware and in the District of Delaware. Defendant has paying customers who are residents of the State of Delaware and the District of Delaware and who each use and have used the Defendant's products and services in the State of Delaware and in the District of Delaware.

8. Venue is proper in the District of Delaware pursuant to 28 U.S.C. §§ 1400(b). On information and belief, Defendant is incorporated in this district, and has transacted business in this district, and has directly and/or indirectly committed acts of patent infringement in this district.

COUNT I – PATENT INFRINGEMENT

9. Plaintiff refers to and incorporates herein the allegations of Paragraphs 1-8 above.

10. The '504 patent was duly and legally issued by the United States Patent and Trademark Office on June 20, 2017 after full and fair examination. Plaintiff is the owner by assignment of the '504 patent and possesses all rights of recovery under the '504 patent, including the exclusive right to sue for infringement and recover past damages and obtain injunctive relief.

11. Defendant owns, uses, operates, advertises, controls, sells, and otherwise provides apparatus, systems and methods that infringe the '504 patent. Claim 2 of the '504 patent provides, among other things, "a remote resource access interface apparatus comprising: a touch input detection unit configured to detect touch input on a display screen and to generate touch position information on a display screen; a communication unit configured to receive supportable key information from a compatible portable device, the communication unit further configured to transmit input key information to the portable device and to receive video information from the portable device; a video output unit configured to display adjusted video information in the form of a visual image, the video output unit having a display screen having a screen specification different from a screen specification of the portable device, wherein the screen specification

includes screen resolution information regarding the screen resolutions supported by the portable device; and a key advisor unit configured to output the supportable key information to the video output unit wherein the key advisor unit is configured to receive the touch position information through the touch input detection unit, and wherein the adjusted video information is video data adjusted to screen resolution supported by the video output unit on the basis of the screen resolution information supported by the portable device, and the touch position information is mapped to one of key values indicated by the supportable key information of the portable device such that the touch position information matches key values of the portable device.”

12. Defendant has been and is now infringing the ‘504 Patent in the State of Delaware, in this judicial district, and elsewhere in the United States, by, among other things, directly or through intermediaries, making, using, importing, testing, providing, supplying, distributing, selling, and/or offering for sale apparatus and systems (including, without limitation, the Defendant’s products including Apple CarPlay functionality of the Buick 2016 - 2018 LaCrosse, 2016 - 2018 Regal, 2017 - 2018 Encore, 2017 - 2018 Envision, Cadillac 2016 ELR, 2016 - 2018 ATS, 2016 - 2018 ATS-V, 2016 - 2018 CTS, 2016 - 2018 CTS-V, 2016 - 2018 CT6, 2016 - 2018 Escalade / ESV, 2016 - 2018 XTS, 2017 - 2018 XT5, 2019 XT4, Chevrolet 2016 - 2017 Cavalier, 2016 - 2018 Camaro, 2016 - 2018 Camaro Convertible, 2016 - 2018 Colorado, 2016 - 2018 Corvette, 2016 - 2018 Corvette Convertible, 2016 - 2018 Cruze, 2016 - 2018 Impala, 2016 - 2018 Malibu, 2016 - 2018 Silverado, 2016 - 2018 Silverado HD, 2016 - 2018 Spark, 2016 - 2018 Suburban, 2016 - 2018 Tahoe, 2016 - 2018 Volt, 2017 - 2018 Aveo, 2017 - 2018 Bolt EV, 2017 - 2018 Prisma, 2017 - 2018 S10, 2017 - 2018 Sonic, 2017 - 2018 Trax, 2018 Equinox, 2018 Traverse, 2019 Blazer, GMC 2016 - 2018 Canyon, 2016 - 2018 Sierra, 2016 - 2018 Yukon, 2016 - 2018 Yukon XL, 2017 - 2018 Acadia, identified herein as the “Accused Instrumentalities”) that

provide a remote resource access interface device, covered by at least claims 1, 2, 3, 4, 5, 6, 7, 8, and 9 of the ‘504 Patent to the injury of Dale Progress Ltd. Defendant is directly infringing, literally infringing, and/or infringing the ‘504 Patent under the doctrine of equivalents. Defendant is thus liable for infringement of the ‘504 Patent pursuant to 35 U.S.C. § 271.

13. Defendant has been and is now infringing the ‘504 Patent in the State of Delaware, in this judicial district, and elsewhere in the United States, by, among other things, directly or through intermediaries, making, using, importing, testing, providing, supplying, distributing, selling, and/or offering for sale apparatus and systems (including, without limitation, the Defendant’s products including Android Auto functionality of the Buick 2016 - 2018 LaCrosse, 2016 - 2018 Regal, 2017 - 2018 Encore, 2017 - 2018 Envision, Cadillac 2016 ELR, 2016 - 2018 ATS, 2016 - 2018 ATS-V, 2016 - 2018 CTS, 2016 - 2018 CTS-V, 2016 - 2018 CT6, 2016 - 2018 Escalade / ESV, 2016 - 2018 XTS, 2017 - 2018 XT5, 2019 XT4, Chevrolet 2016 - 2017 Cavalier, 2016 - 2018 Camaro, 2016 - 2018 Camaro Convertible, 2016 - 2018 Colorado, 2016 - 2018 Corvette, 2016 - 2018 Corvette Convertible, 2016 - 2018 Cruze, 2016 - 2018 Impala, 2016 - 2018 Malibu, 2016 - 2018 Silverado, 2016 - 2018 Silverado HD, 2016 - 2018 Spark, 2016 - 2018 Suburban, 2016 - 2018 Tahoe, 2016 - 2018 Volt, 2017 - 2018 Aveo, 2017 - 2018 Bolt EV, 2017 - 2018 Prisma, 2017 - 2018 S10, 2017 - 2018 Sonic, 2017 - 2018 Trax, 2018 Equinox, 2018 Traverse, 2019 Blazer, GMC 2016 - 2018 Canyon, 2016 - 2018 Sierra, 2016 - 2018 Yukon, 2016 - 2018 Yukon XL, 2017 - 2018 Acadia, identified herein as the “Accused Instrumentalities”) that provide a remote resource access interface device, covered by at least claims 1, 2, 3, 4, 5, 6, 7, 8, and 9 of the ‘504 Patent to the injury of Dale Progress Ltd. Defendant is directly infringing, literally infringing, and/or infringing the ‘504 Patent under the doctrine of equivalents. Defendant is thus liable for infringement of the ‘504 Patent pursuant to 35 U.S.C. § 271.

14. Defendant has induced and continues to induce infringement of the '504 Patent by intending that others use, offer for sale, or sell in the United States, products and/or methods covered by one or more claims of the '504 Patent, including, but not limited to, a remote resource access interface apparatus. Defendant provides these products to others, such as customers, resellers and end-use consumers who, in turn, use, offer for sale, or sell in the United States these a remote resource access interface apparatus that infringe one or more claims of the '504 Patent.

15. Defendant indirectly infringes the '504 Patent by inducing infringement by others, such as resellers, customers and end-use consumers, in accordance with 35 U.S.C. § 271(b) in this District and elsewhere in the United States. Direct infringement is a result of the activities performed by the resellers, customers and end-use consumers of a remote resource access interface apparatus.

16. Defendant received notice of the '504 Patent at least as of the date this lawsuit was filed.

17. Defendant's affirmative acts of providing and/or selling a remote resource access interface apparatus, including manufacturing and distributing, and providing instructions for using a remote resource access interface apparatus in their normal and customary way to infringe one or more claims of the '504 Patent. Defendant performs the acts that constitute induced infringement, and induce actual infringement, with the knowledge of the '504 Patent and with the knowledge or willful blindness that the induced acts constitute infringement.

18. Defendant specifically intends for others, such as resellers, customers and end-use consumers, to directly infringe one or more claims of the '504 Patent, or, alternatively, has been willfully blind to the possibility that its inducing acts would cause infringement. By way of example, and not as limitation, Defendant induces such infringement by its affirmative action by,

among other things: (a) providing advertising on the benefits of using the Accused Instrumentalities' functionality; (b) providing information regarding how to use the Accused Instrumentalities' functionality; (c) providing instruction on how to use the Accused Instrumentalities' functionality; and (d) providing hardware and/or software components required to infringe the claims of the '504 Patent.

19. Accordingly, a reasonable inference is that Defendant specifically intends for others, such as resellers, customers and end-use consumers, to directly infringe one or more claims of the '504 Patent in the United States because Defendant has knowledge of the '504 Patent at least as of the date this lawsuit was filed and Defendant actually induces others, such as resellers, customers and end-use consumers, to directly infringe the '504 Patent by using, selling, and/or distributing, within the United States, a remote resource access interface apparatus.

20. As a result of Defendant's acts of infringement, Plaintiff has suffered and will continue to suffer damages in an amount to be proved at trial.

21. Claim 2 of the '504 patent, claims:

A remote resource access interface apparatus comprising:



Apple CarPlay The ultimate copilot.

Available on select cars, CarPlay is a smarter, safer way to use your iPhone in the car. CarPlay takes the things you want to do with your iPhone while driving and puts them right on your car's built-in display. You can get directions, make calls, send and receive messages, and listen to music, all in a way that allows you to stay focused on the road. Just connect your iPhone and go.

SOURCE: <https://www.apple.com/ios/carplay/>

CarPlay



2016 - 2017 Excelle
 2016 - 2018 LaCrosse
 2016 - 2018 Regal
 2017 - 2018 Encore
 2017 - 2018 Envision
 2018 Excelle GT
 2018 Excelle GT-MPV
 2018 GL6

CarPlay



2016 ELR
 2016 - 2018 ATS
 2016 - 2018 ATS-V
 2016 - 2018 CTS
 2016 - 2018 CTS-V
 2016 - 2018 CT6
 2016 - 2018 Escalade / ESV
 2016 - 2018 XTS
 2017 - 2018 XT5
 2019 XT4

CarPlay



2016 - 2017 Cavalier
 2016 - 2018 Camaro
 2016 - 2018 Camaro Convertible
 2016 - 2018 Colorado
 2016 - 2018 Corvette
 2016 - 2018 Corvette Convertible
 2016 - 2018 Cruze
 2016 - 2018 Impala
 2016 - 2018 Malibu
 2016 - 2018 Sail LOVA
 2016 - 2018 Silverado
 2016 - 2018 Silverado HD
 2016 - 2018 Spark
 2016 - 2018 Suburban
 2016 - 2018 Tahoe
 2016 - 2018 Volt
 2017 - 2018 Aveo
 2017 - 2018 Bolt EV
 2017 - 2018 Prisma
 2017 - 2018 S10
 2017 - 2018 Sonic
 2017 - 2018 Trax
 2018 Equinox
 2018 Traverse
 2019 Blazer

CarPlay



2016 - 2018 Canyon
 2016 - 2018 Sierra
 2016 - 2018 Yukon
 2016 - 2018 Yukon XL
 2017 - 2018 Acadia

Source: <https://www.apple.com/ios/carplay/available-models/> (last accessed January 26, 2019)



SPARK

STARTING AT \$13,220 [±]

As shown \$17,015 [±]



SONIC

STARTING AT \$15,420 [±]

As shown \$21,915 [±]



CRUZE

STARTING AT \$17,995 [±]

As shown \$23,915 [±]



MALIBU

STARTING AT \$21,680 [±]

As shown \$32,015 [±]



IMPALA

STARTING AT \$28,020 [±]



VOLT

STARTING AT \$33,220 [±]

As shown \$38,445 [±]



BOLT EV

STARTING AT \$36,620 [±]

As shown \$42,875 [±]



CAMARO

STARTING AT \$25,905 [±]

As shown \$26,300 [±]



CORVETTE Z06

STARTING AT \$80,900 [±]

As shown \$90,840 [±]



TRAX

STARTING AT \$21,300 [±]

As shown \$27,600 [±]



EQUINOX

STARTING AT \$23,800 [±]

As shown \$31,495 [±]



BLAZER

STARTING AT \$28,800 [±]

As shown \$46,670 [±]



TRAVERSE

STARTING AT \$29,930 [±]

As shown \$45,500 [±]



TAHOE

STARTING AT \$48,000 [±]

As shown \$62,700 [±]



SUBURBAN

STARTING AT \$50,800 [±]

As shown \$65,500 [±]



COLORADO

STARTING AT \$21,300 [±]

As shown \$41,680 [±]



SILVERADO 1500

STARTING AT \$28,300 [±]

As shown \$49,400 [±]

Source: <https://www.chevrolet.com> (last accessed January 26, 2019)



ENCORE



ENVISION



ENCLAVE



REGAL TourX



REGAL SPORTBACK



REGAL GS



LACROSSE



CASCADA



ENCLAVE AVENIR



REGAL AVENIR



LACROSSE AVENIR

Source: <https://www.buick.com> (last accessed January 26, 2019)



XT4

From: \$34,795 *
As shown \$39,920 *



XT5

From: \$41,895 *
As shown \$49,120 *



ESCALADE

From: \$75,195 *
As shown \$82,020 *

SEDANS



CTS

From: \$48,995 *
As shown \$53,320 *



CTS-V

From: \$86,995 *
As shown \$88,995 *



XTS

From: \$48,895 *
As shown \$51,520 *



CT6

From: \$50,495 *
As shown \$67,220 *



CT6-V

AVAILABLE MID-2019

COUPES



ATS








From: \$38,995 *
As shown \$42,795 *



ATS-V

From: \$67,795 *
As shown \$88,420 *

Source: <https://www.cadillac.com> (last accessed January 26, 2019)

 <p>CANYON TOW UP TO: 7,700 LBS. STARTING AT: \$21,500 AS SHOWN: \$30,795</p> <p>BUILD & PRICE</p> <p>SLT STARTING AT: \$15,800</p> <p>ALL TERRAIN STARTING AT: \$16,500</p> <p>DENALI STARTING AT: \$40,800</p>	 <p>NEXT GENERATION SIERRA 1500 TOW UP TO: 12,200 LBS. STARTING AT: \$33,500 AS SHOWN: \$60,010</p> <p>BUILD & PRICE</p> <p>SLT STARTING AT: \$44,300</p> <p>AT4 STARTING AT: \$50,800</p> <p>DENALI STARTING AT: \$64,700</p>	 <p>SIERRA 1500 TOW UP TO: 12,500 LBS. STARTING AT: \$29,000 AS SHOWN: \$55,390</p> <p>BUILD & PRICE</p> <p>SLT STARTING AT: \$42,870</p> <p>DENALI STARTING AT: \$62,800</p>	
 <p>SIERRA HD TOW UP TO: 23,300 LBS. STARTING AT: \$34,940 AS SHOWN: \$69,800</p> <p>BUILD & PRICE</p>	 <p>SIERRA 1500 LIMITED TOW UP TO: 9,400 LBS. STARTING AT: \$35,100 AS SHOWN: \$77,050</p> <p>BUILD & PRICE</p>	 <p>ACADIA SEATING: UP TO 7 STARTING AT: \$29,000 AS SHOWN: \$38,495</p>	 <p>YUKON SEATING: UP TO 8 STARTING AT: \$49,100 AS SHOWN: \$58,145</p>

Source: <https://www.gmc.com/> (last accessed January 26, 2019)

a touch input detection unit configured to detect touch input on a display screen and to generate touch position information on a display screen;

Defendant provides a touch input detection unit configured to detect touch input on a display screen and to generate touch position information on a display screen;

The ‘504 patent specification clearly states that a touch input detection unit detects a touch input on the display screen and generates position information on the display screen in association of the current image.

The touch input detection unit detects a touch input on the display screen and generates position information on the display screen in association of the current image. The touch input detection unit transmits the position information associated with the current image to the portable device. The touch input detection unit is implemented in the form of a touch-sensitive touchscreen covering the display screen of the video output unit. The touch input detection unit may further include a processor for converting a pressure voltage sensed on the display screen to the position information. *See* ‘504 patent Col. 4 *l.* 42-47.

Touchscreen

Users can interact with a CarPlay app by performing gestures on the car's built-in touchscreen display. CarPlay supports both low-fidelity and high-fidelity touchscreen displays. High-fidelity screens have lower finger-tracking latency than low-fidelity screens, and therefore support more gestures. Depending on the display, CarPlay apps can respond single-finger gestures, as follows.

Gesture	Usage	Low-fidelity screen	High-fidelity screen
Tap	Activates a control or selects an item.	●	●
Double-tap	Zooms in and centers content.	●	●
Touch and hold	Activates a control for a period of time. For example, touching and holding the Next Track button in the Music app fast-forwards the currently playing track.	●	●
Flick	Scrolls or pans quickly.		●
Drag	Moves an element from side-to-side or drags an		●

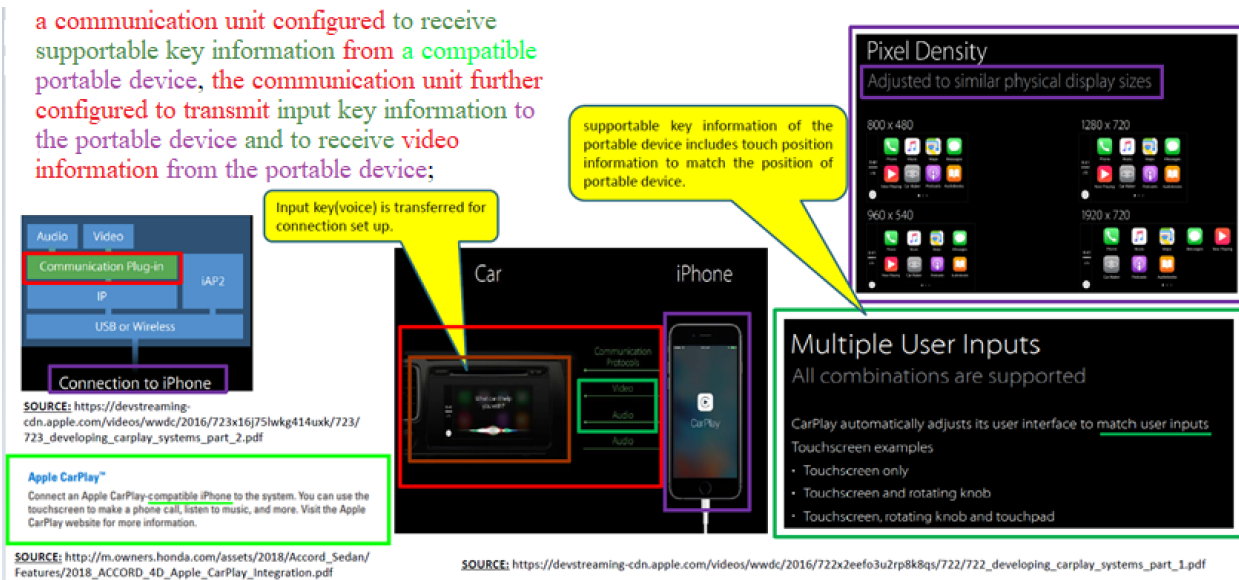
SOURCE: <https://developer.apple.com/design/human-interface-guidelines/carplay/interaction/touchscreen/>

a communication unit configured to receive supportable key information from a compatible portable device, the communication unit further configured to transmit input key information to the portable device and to receive video information from the portable device;

Defendant provides a communication unit configured to receive supportable key information from a compatible portable device, the communication unit further configured to transmit input key information to the portable device and to receive video information from the portable device;

The specification discloses sufficient structure for one of ordinary skilled in the art to build or program a communication unit. The specification clearly states that a communication unit utilizes wireless communication interfaces to perform the claim limitation functions.

The communication unit can be provided with at least one of wireless communication interfaces specified by Bluetooth, wireless fidelity (wi-fi), ZigBee, wireless broadband (WiBro) protocols for communicating with the portable device. The communication unit also can be connected to the portable device through a communication wire so as to exchange data with the portable device in series or in parallel. *See* '504 patent Col. 4 l. 8-15.

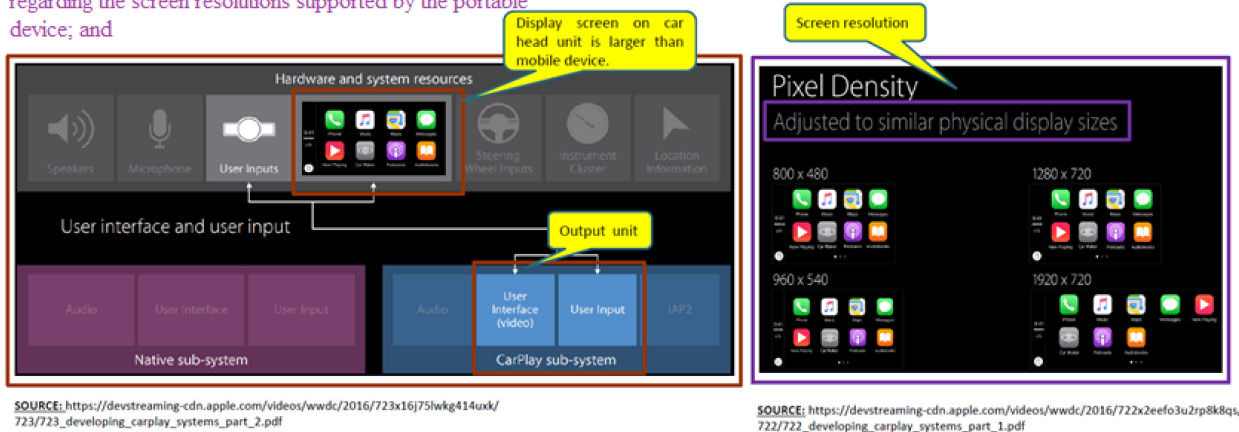


a video output unit configured to display adjusted video information in the form of a visual image, the video output unit having a display screen having a screen specification different from a screen specification of the portable device, wherein the screen specification includes screen resolution information regarding the screen resolutions supported by the portable device; and

Defendant provides a video output unit configured to display adjusted video information in the form of a visual image, the video output unit having a display screen having a screen specification different from a screen specification of the portable device, wherein the screen specification includes screen resolution information regarding the screen resolutions supported by the portable device; and

The video output unit displays the video information output by the pixel information processing unit. The video output unit can be implemented with a liquid crystal display (LCD) panel or an organic light emitting diode (OLED) display panel. *See* '504 patent Col. 3 l. 11-15. The video output unit outputs the video information received from the pixel information processing unit in the form of a visual image. The video output unit can be implemented with a liquid crystal display (LCD) panel or an organic light emitting diode (OLED) panel. Preferably, the video output unit is provided with a display screen larger than that of the portable device. *See* '504 patent Col. 4 l. 29-35.

a video output unit configured to display adjusted video information in the form of a visual image, the video output unit having a display screen having a screen specification different from a screen specification of the portable device, wherein the screen specification includes screen resolution information regarding the screen resolutions supported by the portable device; and



a key advisor unit configured to output the supportable key information to the video output unit wherein the key advisor unit is configured to receive the touch position information through the touch input detection unit, and wherein the adjusted video information is video data adjusted to screen resolution supported by the video output unit on the basis of the screen resolution information supported by the portable device, and the touch position information is mapped to one of key values indicated by the supportable key information of the portable device such that the touch position information matches key values of the portable device.

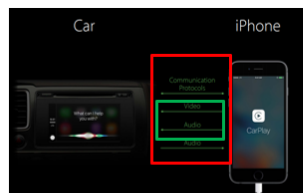
Defendant provides a key advisor unit configured to output the supportable key information to the video output unit wherein the key advisor unit is configured to receive the touch position information through the touch input detection unit, and wherein the adjusted video information is video data adjusted to screen resolution supported by the video output unit on the basis of the screen resolution information supported by the portable device, and the touch position information is mapped to one of key values indicated by the supportable key information of the portable device such that the touch position information matches key values of the portable device.

The key advisor unit and key input unit are each comprised of software utilizing a microprocessor and storage means on a computer to perform their respective steps as outlined in the specification. The specification describes an algorithm to transform a general-purpose microprocessor to a special purpose computer so that a person of ordinary skill in the art can implement the disclosed algorithm to achieve the claimed function. A disclosed algorithm can include steps for achieving a result as shown in the '504 patent specification.

In at least one embodiment, the key adviser unit extracts supportable key information from the connection establishment response signal and transmits the supportable key information to the video output unit so as to be displayed on the screen. See '504 patent Col. 3 l. 16-19. The key input unit is provided with a plurality of keys for generating input key commands. The input key commands are generated by matching the key values input through the key input unit to the key

values of the portable device with reference to the supportable key information. *See* '504 patent Col. 3 *l.* 20-25.

In at least one embodiment, the key advisor unit extracts compatible key information from the connection establishment response signal and displays the compatible key information on the display screen of the video output unit. The key advisor unit displays a key among the keys provided by the compatible key information, which is matched to the key input through the key input unit, on the display screen of the video output unit. If a set of keys are selected by through the key input unit, the key advisor unit displays the keys supported by the portable device on the display screen of the video output unit. If a key is input through the key input unit, the key advisor unit matches the key value of the input key to a key value of the corresponding key supported by the portable device. *See* '504 patent Col. 4 *l.* 48-62. The key input unit is provided with a plurality of keys for generating input key values. *See* '504 patent Col. 4 *l.* 63-64.



Multiple User Inputs

All combinations are supported

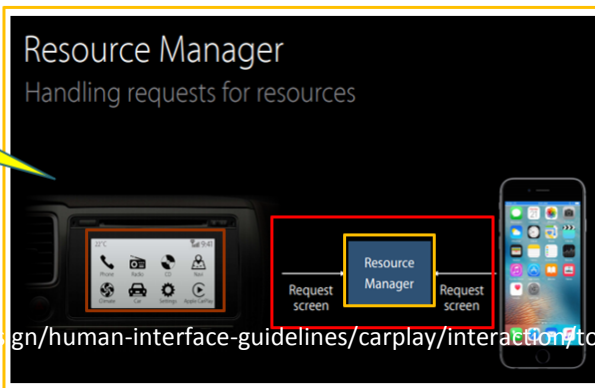
CarPlay automatically adjusts its user interface to match user inputs

Touchscreen examples

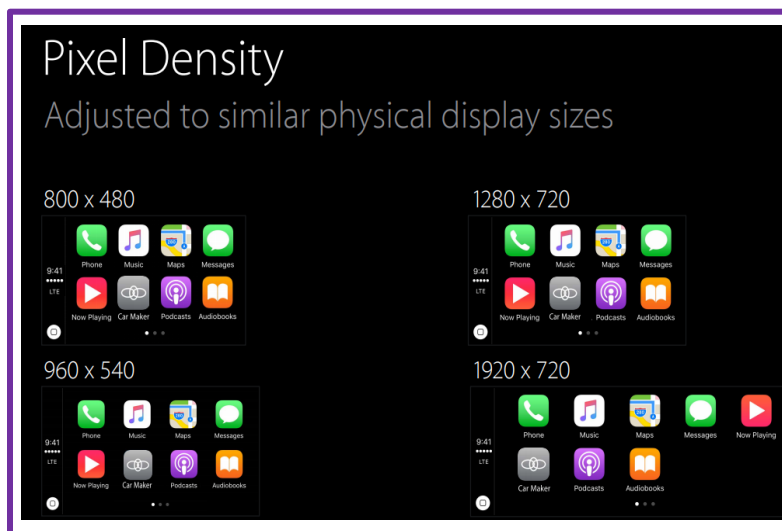
- Touchscreen only
- Touchscreen and rotating knob
- Touchscreen, rotating knob and touchpad

SOURCE: https://developer.apple.com/videos/wwdc/2016/722x2eefo3u2rp8k8qs/722/722_developing_carplay_systems_part_1.pdf

SOURCE: https://devstreaming-cdn.apple.com/videos/wwdc/2016/722x2eefo3u2rp8k8qs/722/722_developing_carplay_systems_part_1.pdf



SOURCE: https://devstreaming-cdn.apple.com/videos/wwdc/2016/723x16j75lwkq414uxk/723/723_developing_carplay_systems_part_2.pdf



SOURCE: https://devstreaming-cdn.apple.com/videos/wwdc/2016/722x2eefo3u2rp8k8qs/722/722_developing_carplay_systems

Touchscreen

Users can interact with a CarPlay app by performing gestures on the car's built-in touchscreen display. CarPlay supports both low-fidelity and high-fidelity touchscreen displays. High-fidelity screens have lower finger-tracking latency than low-fidelity screens, and therefore support more gestures. Depending on the display, CarPlay apps can respond single-finger gestures, as follows.

Gesture	Usage	Low-fidelity screen	High-fidelity screen
Tap	Activates a control or selects an item.	●	●
Double-tap	Zooms in and centers content.	●	●
Touch and hold	Activates a control for a period of time. For example, touching and holding the Next Track button in the Music app fast-forwards the currently playing track.	●	●
Flick	Scrolls or pans quickly.		●
Drag	Moves an element from side-to-side or drags an		●

SOURCE: <https://developer.apple.com/design/human-interface-guidelines/carplay/interaction/touchscreen/>

COUNT II – PATENT INFRINGEMENT

22. Plaintiff refers to and incorporates herein the allegations of Paragraphs 1-21 above.

23. The '461 patent was duly and legally issued by the United States Patent and Trademark Office on November 27, 2012 after full and fair examination. Plaintiff is the owner by assignment of the '461 patent and possesses all rights of recovery under the '461 patent, including the exclusive right to sue for infringement and recover past damages and obtain injunctive relief.

24. Defendant owns, uses, operates, advertises, controls, sells, and otherwise provides apparatus and methods that infringe the '461 patent. Claim 9 of the '461 patent provides, among other things, “a remote resource access interface apparatus comprising: a key input unit configured to generate input key values; a communication unit configured to transmit a connection establishment request message to determine compatibility with a portable device and in order to establish a connection and, if compatible, to receive a connection establishment response message including screen resolution information and supportable key information from the portable device,

the communication unit further configured to transmit input key information and to receive video information from the portable device after establishing the connection; a video output unit configured to display the video information in the form of a visual image, the video output unit having a display screen larger than the portable device, wherein the screen resolution information includes information regarding the screen resolutions supported by the video output unit; and a key advisor unit configured to extract the supportable key information from the connection establishment response message and output the supportable key information to the video output unit, wherein the key advisor unit displays on a display screen of the video output unit, if a key configuration mode is activated, keys of the portable device and is configured to receive corresponding keys through the key input unit, and wherein key values corresponding to the keys of the key input unit match key values of the portable device, and wherein the video information is video data adjusted in resolution by the portable device for the video output unit on the basis of the screen resolution information, and the input key value is mapped to one of key values indicated by the supportable key information of the portable device.”

25. Defendant has been and is now infringing the ‘461 Patent in the State of Delaware, in this judicial district, and elsewhere in the United States, by, among other things, directly or through intermediaries, making, using, importing, testing, providing, supplying, distributing, selling, and/or offering for sale apparatus (including, without limitation, the Defendant’s products including Apple CarPlay functionality of the Buick 2016 - 2018 LaCrosse, 2016 - 2018 Regal, 2017 - 2018 Encore, 2017 - 2018 Envision, Cadillac 2016 ELR, 2016 - 2018 ATS, 2016 - 2018 ATS-V, 2016 - 2018 CTS, 2016 - 2018 CTS-V, 2016 - 2018 CT6, 2016 - 2018 Escalade / ESV, 2016 - 2018 XTS, 2017 - 2018 XT5, 2019 XT4, Chevrolet 2016 - 2017 Cavalier, 2016 - 2018 Camaro, 2016 - 2018 Camaro Convertible, 2016 - 2018 Colorado, 2016 - 2018 Corvette, 2016 -

2018 Corvette Convertible, 2016 - 2018 Cruze, 2016 - 2018 Impala, 2016 - 2018 Malibu, 2016 - 2018 Silverado, 2016 - 2018 Silverado HD, 2016 - 2018 Spark, 2016 - 2018 Suburban, 2016 - 2018 Tahoe, 2016 - 2018 Volt, 2017 - 2018 Aveo, 2017 - 2018 Bolt EV, 2017 - 2018 Prisma, 2017 - 2018 S10, 2017 - 2018 Sonic, 2017 - 2018 Trax, 2018 Equinox, 2018 Traverse, 2019 Blazer, GMC 2016 - 2018 Canyon, 2016 - 2018 Sierra, 2016 - 2018 Yukon, 2016 - 2018 Yukon XL, 2017 - 2018 Acadia, identified herein as the “Accused Instrumentalities”) that provide a remote resource access interface device, covered by at least claims 1, 2, 4, 5, 6, 7, 8, 9 and 10 of the ‘461 Patent to the injury of Dale Progress Ltd. Defendant is directly infringing, literally infringing, and/or infringing the ‘461 Patent under the doctrine of equivalents. Defendant is thus liable for infringement of the ‘461 Patent pursuant to 35 U.S.C. § 271.

26. Defendant has been and is now infringing the ‘461 Patent in the State of Delaware, in this judicial district, and elsewhere in the United States, by, among other things, directly or through intermediaries, making, using, importing, testing, providing, supplying, distributing, selling, and/or offering for sale apparatus (including, without limitation, the Defendant’s products including Android Auto functionality of the Buick 2016 - 2018 LaCrosse, 2016 - 2018 Regal, 2017 - 2018 Encore, 2017 - 2018 Envision, Cadillac 2016 ELR, 2016 - 2018 ATS, 2016 - 2018 ATS-V, 2016 - 2018 CTS, 2016 - 2018 CTS-V, 2016 - 2018 CT6, 2016 - 2018 Escalade / ESV, 2016 - 2018 XTS, 2017 - 2018 XT5, 2019 XT4, Chevrolet 2016 - 2017 Cavalier, 2016 - 2018 Camaro, 2016 - 2018 Camaro Convertible, 2016 - 2018 Colorado, 2016 - 2018 Corvette, 2016 - 2018 Corvette Convertible, 2016 - 2018 Cruze, 2016 - 2018 Impala, 2016 - 2018 Malibu, 2016 - 2018 Silverado, 2016 - 2018 Silverado HD, 2016 - 2018 Spark, 2016 - 2018 Suburban, 2016 - 2018 Tahoe, 2016 - 2018 Volt, 2017 - 2018 Aveo, 2017 - 2018 Bolt EV, 2017 - 2018 Prisma, 2017 - 2018 S10, 2017 - 2018 Sonic, 2017 - 2018 Trax, 2018 Equinox, 2018 Traverse, 2019 Blazer, GMC

2016 - 2018 Canyon, 2016 - 2018 Sierra, 2016 - 2018 Yukon, 2016 - 2018 Yukon XL, 2017 - 2018 Acadia, identified herein as the “Accused Instrumentalities”) that provide a remote resource access interface device, covered by at least claims 1, 2, 4, 5, 6, 7, 8, 9 and 10 of the ‘461 Patent to the injury of Dale Progress Ltd. Defendant is directly infringing, literally infringing, and/or infringing the ‘461 Patent under the doctrine of equivalents. Defendant is thus liable for infringement of the ‘461 Patent pursuant to 35 U.S.C. § 271.

27. Defendant has induced and continues to induce infringement of the ‘461 Patent by intending that others use, offer for sale, or sell in the United States, products and/or methods covered by one or more claims of the ‘461 Patent, including, but not limited to, a remote resource access interface apparatus. Defendant provides these products to others, such as customers, resellers and end-use consumers who, in turn, use, offer for sale, or sell in the United States these a remote resource access interface apparatus that infringe one or more claims of the ‘461 Patent.

28. Defendant indirectly infringes the ‘461 Patent by inducing infringement by others, such as resellers, customers and end-use consumers, in accordance with 35 U.S.C. § 271(b) in this District and elsewhere in the United States. Direct infringement is a result of the activities performed by the resellers, customers and end-use consumers of a remote resource access interface apparatus.

29. Defendant received notice of the ‘461 Patent at least as of the date this lawsuit was filed.

30. Defendant’s affirmative acts of providing and/or selling a remote resource access interface apparatus, including manufacturing and distributing, and providing instructions for using a remote resource access interface apparatus in their normal and customary way to infringe one or more claims of the ‘461 Patent. Defendant performs the acts that constitute induced infringement,

and induce actual infringement, with the knowledge of the '461 Patent and with the knowledge or willful blindness that the induced acts constitute infringement.

31. Defendant specifically intends for others, such as resellers, customers and end-use consumers, to directly infringe one or more claims of the '461 Patent, or, alternatively, has been willfully blind to the possibility that its inducing acts would cause infringement. By way of example, and not as limitation, Defendant induces such infringement by its affirmative action by, among other things: (a) providing advertising on the benefits of using the Accused Instrumentalities' functionality; (b) providing information regarding how to use the Accused Instrumentalities' functionality; (c) providing instruction on how to use the Accused Instrumentalities' functionality; and (d) providing hardware and/or software components required to infringe the claims of the '461 Patent.

32. Accordingly, a reasonable inference is that Defendant specifically intends for others, such as resellers, customers and end-use consumers, to directly infringe one or more claims of the '461 Patent in the United States because Defendant has knowledge of the '461 Patent at least as of the date this lawsuit was filed and Defendant actually induces others, such as resellers, customers and end-use consumers, to directly infringe the '461 Patent by using, selling, and/or distributing, within the United States, a remote resource access interface apparatus.

33. As a result of Defendant's acts of infringement, Plaintiff has suffered and will continue to suffer damages in an amount to be proved at trial.

34. Claim 9 of the '461 patent, claims:

a remote resource access interface apparatus comprising:



Apple CarPlay

The ultimate copilot.

Available on select cars, CarPlay is a smarter, safer way to use your iPhone in the car. CarPlay takes the things you want to do with your iPhone while driving and puts them right on your car's built-in display. You can get directions, make calls, send and receive messages, and listen to music, all in a way that allows you to stay focused on the road. Just connect your iPhone and go.

SOURCE: <https://www.apple.com/ios/carplay/>

CarPlay



2016 - 2017 Excelle
2016 - 2018 LaCrosse
2016 - 2018 Regal
2017 - 2018 Encore
2017 - 2018 Envision
2018 Excelle GT
2018 Excelle GT-MPV
2018 GL6

CarPlay



2016 ELR
2016 - 2018 ATS
2016 - 2018 ATS-V
2016 - 2018 CTS
2016 - 2018 CTS-V
2016 - 2018 CT6
2016 - 2018 Escalade / ESV
2016 - 2018 XTS
2017 - 2018 XT5
2019 XT4

CarPlay



2016 - 2017 Cavalier
 2016 - 2018 Camaro
 2016 - 2018 Camaro Convertible
 2016 - 2018 Colorado
 2016 - 2018 Corvette
 2016 - 2018 Corvette Convertible
 2016 - 2018 Cruze
 2016 - 2018 Impala
 2016 - 2018 Malibu
 2016 - 2018 Sail LOVA
 2016 - 2018 Silverado
 2016 - 2018 Silverado HD
 2016 - 2018 Spark
 2016 - 2018 Suburban
 2016 - 2018 Tahoe
 2016 - 2018 Volt
 2017 - 2018 Aveo
 2017 - 2018 Bolt EV
 2017 - 2018 Prisma
 2017 - 2018 S10
 2017 - 2018 Sonic
 2017 - 2018 Trax
 2018 Equinox
 2018 Traverse
 2019 Blazer

CarPlay



2016 - 2018 Canyon
 2016 - 2018 Sierra
 2016 - 2018 Yukon
 2016 - 2018 Yukon XL
 2017 - 2018 Acadia

Source: <https://www.apple.com/ios/carplay/available-models/> (last accessed January 26, 2019)



SPARK

STARTING AT \$13,220[±]
 As shown \$17,015[±]



SONIC

STARTING AT \$15,420[±]
 As shown \$21,915[±]



CRUZE

STARTING AT \$17,995[±]
 As shown \$23,915[±]



MALIBU

STARTING AT \$21,680[±]
 As shown \$32,015[±]



IMPALA

STARTING AT \$28,020[±]



VOLT

STARTING AT \$33,220[±]
 As shown \$38,445[±]



BOLT EV

STARTING AT \$36,620[±]
 As shown \$42,875[±]



CAMARO

STARTING AT \$25,905[±]
 As shown \$26,300[±]



CORVETTE Z06

STARTING AT \$80,900[±]
 As shown \$90,840[±]



TRAX

STARTING AT \$21,300[±]
As shown \$27,600[±]



EQUINOX

STARTING AT \$23,800[±]
As shown \$31,495[±]



BLAZER

STARTING AT \$28,800[±]
As shown \$46,670[±]



TRAVERSE

STARTING AT \$29,930[±]
As shown \$45,500[±]



TAHOE

STARTING AT \$48,000[±]
As shown \$62,700[±]



SUBURBAN

STARTING AT \$50,800[±]
As shown \$65,500[±]



COLORADO

STARTING AT \$21,300[±]
As shown \$41,680[±]



SILVERADO 1500

STARTING AT \$28,300[±]
As shown \$49,400[±]

Source: <https://www.chevrolet.com> (last accessed January 26, 2019)



ENCORE



ENVISION



ENCLAVE



REGAL TourX



REGAL SPORTBACK



REGAL GS



LACROSSE



CASCADA



ENCLAVE AVENIR



REGAL AVENIR



LACROSSE AVENIR

Source: <https://www.buick.com> (last accessed January 26, 2019)



XT4
From: \$34,795 *
As shown \$39,820 *



XT5
From: \$41,895 **
As shown \$49,120 *



ESCALADE
From: \$75,195 **
As shown \$82,020 *

SEDANS



CTS
From: \$48,995 **
As shown \$53,320 **



CTS-V
From: \$68,995 **
As shown \$86,995 **



XTS
From: \$48,895 **
As shown \$51,520 **



CT6
From: \$50,495 **
As shown \$87,220 **



CT6-V
AVAILABLE MID-2018

COUPES

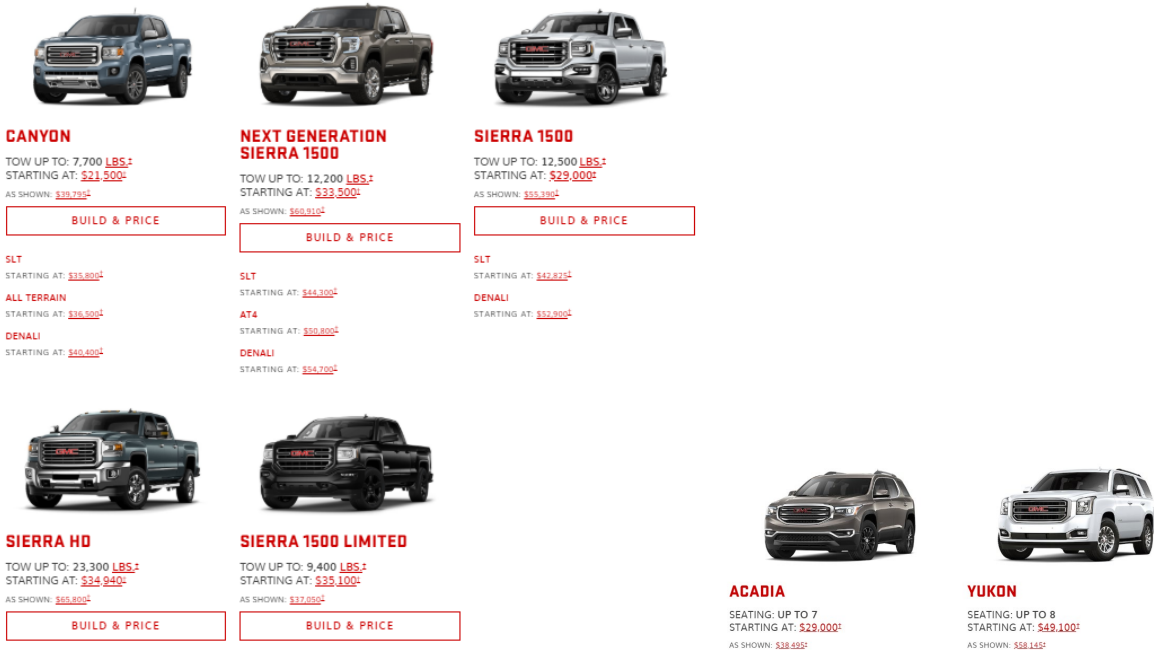


ATS
From: \$38,995 *
As shown \$42,795 *



ATS-V
From: \$67,795 **
As shown \$86,420 **

Source: <https://www.cadillac.com> (last accessed January 26, 2019)



The screenshot displays the GMC website's vehicle selection interface. It features a grid of vehicle images with corresponding text boxes below them. Each text box includes the model name, towing capacity, starting price, and a 'BUILD & PRICE' button. The models shown are Canyon, Next Generation Sierra 1500, Sierra 1500, Sierra HD, Sierra 1500 Limited, Acadia, and Yukon. Prices are listed in red text, and some are marked with a superscript '2'.

Model	Towing Capacity	Starting Price
CANYON	7,700 LBS. ²	\$21,500 ²
NEXT GENERATION SIERRA 1500	12,200 LBS. ²	\$33,500 ²
SIERRA 1500	12,500 LBS. ²	\$29,000 ²
SIERRA HD	23,300 LBS. ²	\$34,940 ²
SIERRA 1500 LIMITED	9,400 LBS. ²	\$35,100 ²
ACADIA	UP TO 7	\$29,000 ²
YUKON	UP TO 8	\$49,100 ²

Source: <https://www.gmc.com/> (last accessed January 26, 2019)

a key input unit configured to generate input key values;

Defendant provides a key input unit configured to generate input key values.

The key advisor unit and key input unit are each comprised of software utilizing a microprocessor and storage means on a computer to perform their respective steps as outlined in the specification. The specification describes an algorithm to transform a general-purpose microprocessor to a special purpose computer so that a person of ordinary skill in the art can implement the disclosed algorithm to achieve the claimed function. A disclosed algorithm can include steps for achieving a result as shown in the '461 patent specification.

In at least one embodiment, the key adviser unit extracts supportable key information from the connection establishment response signal and transmits the supportable key information to the video output unit so as to be displayed on the screen. *See* '461 patent Col. 3 *l.* 9-12. The key input unit is provided with a plurality of keys for generating input key commands. The input key commands are generated by matching the key values input through the key input unit to the key values of the portable device with reference to the supportable key information. *See* '461 patent Col. 3 *l.* 13-17.

In at least one embodiment, the key adviser unit extracts compatible key information from the connection establishment response signal and displays the compatible key information on the display screen of the video output unit. The key adviser unit displays a key among the keys provided by the compatible key information, which is matched to the key input through the key input unit, on the display screen of the video output unit. If a set of keys are selected by through the key input unit, the key adviser unit displays the keys supported by the portable device on the display screen of the video output unit. If a key is input through the key input unit, the key adviser unit matches the key value of the input key to a key value of the corresponding key supported by

the portable device. *See* ‘461 patent Col. 4 *l.* 37-46. The key input unit is provided with a plurality of keys for generating input key values. The input key commands are generated by matching the key values input through the key input unit to the key values of the portable device with reference to the supportable key information. *See* ‘461 patent Col. 3 *l.* 13-17.

a key input unit configured to generate input key values;

Multiple User Inputs

All combinations are supported

CarPlay automatically adjusts its user interface to match user inputs

Touchscreen examples

- Touchscreen only
- Touchscreen and rotating knob
- Touchscreen, rotating knob and touchpad

Input taken from user.

Car

iPhone

Communication Protocols

Video

Audio

Audio

Siri

To activate Siri voice control, just press and hold the voice control button on the steering wheel.

Touch

If your CarPlay-equipped vehicle has a touchscreen, you can use it to control CarPlay.

Knobs and Controls

CarPlay also works with the knobs, dials, or buttons in the car. If it controls your screen, it controls CarPlay.

SOURCE: https://devstreaming-cdn.apple.com/videos/wwdc/2016/722x2eefo3u2rp8k8qs/722/722_developing_carplay_systems_part_1.pdf

SOURCE: <https://www.apple.com/ios/carplay/>

SOURCE: https://devstreaming-cdn.apple.com/videos/wwdc/2016/722x2eefo3u2rp8k8qs/722/722_developing_carplay_systems_part_1.pdf

a key input unit configured to generate input key values;

Touchscreen

Users can interact with a CarPlay app by performing gestures on the car’s built-in touchscreen display. CarPlay supports both low-fidelity and high-fidelity touchscreen displays. High-fidelity screens have lower finger-tracking latency than low-fidelity screens, and therefore support more gestures. Depending on the display, CarPlay apps can respond single-finger gestures, as follows.

Gesture	Usage	Low-fidelity screen	High-fidelity screen
Tap	Activates a control or selects an item.	●	●
Double-tap	Zooms in and centers content.	●	●
Touch and hold	Activates a control for a period of time. For example, touching and holding the Next Track button in the Music app fast-forwards the currently playing track.	●	●
Flick	Scrolls or pans quickly.		●
Drag	Moves an element from side-to-side or drags an		●

SOURCE: <https://developer.apple.com/design/human-interface-guidelines/carplay/interaction/touchscreen/>

a communication unit configured to transmit a connection establishment request message to determine compatibility with a portable device and in order to establish a connection and, if compatible, to receive a connection establishment response message including screen resolution information and supportable key information from the portable device, the communication unit

26

further configured to transmit input key information and to receive video information from the portable device after establishing the connection;

Defendant provides a communication unit configured to transmit a connection establishment request message to determine compatibility with a portable device and in order to establish a connection and, if compatible, to receive a connection establishment response message including screen resolution information and supportable key information from the portable device, the communication unit further configured to transmit input key information and to receive video information from the portable device after establishing the connection.

The specification discloses sufficient structure for one of ordinary skilled in the art to build or program a communication unit. The specification clearly states that a communication unit utilizes wireless communication interfaces to perform the claim limitation functions.

The communication unit can be provided with at least one of wireless communication interfaces specified by Bluetooth, wireless fidelity (wi-fi), ZigBee, wireless broadband (WiBro) protocols for communicating with the portable device. The communication unit also can be connected to the portable device through a communication wire so as to exchange data with the portable device in series or in parallel. *See* '461 patent Col. 3 l. 65-67 & Col. 4 l. 1-5.

a communication unit configured to transmit a connection establishment request message to determine compatibility with a portable device and in order to establish a connection and, if compatible, to receive a connection establishment response message including screen resolution information and supportable key information from the portable device, the communication unit further configured to transmit input key information and to receive video information from the portable device after establishing the connection;

Input key(voice) is transferred for connection set up.

supportable key information of the portable device includes touch position information to match the position of portable device.

Pixel Density
Adjusted to similar physical display sizes

800 x 480 1280 x 720
960 x 540 1920 x 720

Multiple User Inputs
All combinations are supported

CarPlay automatically adjusts its user interface to match user inputs

Touchscreen examples

- Touchscreen only
- Touchscreen and rotating knob
- Rotating knob and touchpad

Apple CarPlay™
Connect an Apple CarPlay-compatible iPhone to the system. You can use the touchscreen to make a phone call, listen to music, and more. Visit the Apple CarPlay website for more information.

SOURCE: https://devstreaming-cdn.apple.com/videos/wwdc/2016/723x16j75lwkg414uxk/723/723_developing_carplay_systems_part_2.pdf

SOURCE: http://m.owners.honda.com/assets/2018/Accord_Sedan/Features/2018_ACCORD_4D_Apple_CarPlay_Integration.pdf

SOURCE: https://devstreaming-cdn.apple.com/videos/wwdc/2016/722x2eefo3u2rp8k8qs/722/722_developing_carplay_systems_part_1.pdf



Source: https://devstreaming-cdn.apple.com/videos/wwdc/2016/723x16j75lwkg414uxk/723/723_developing_carplay_systems_part_2.pdf

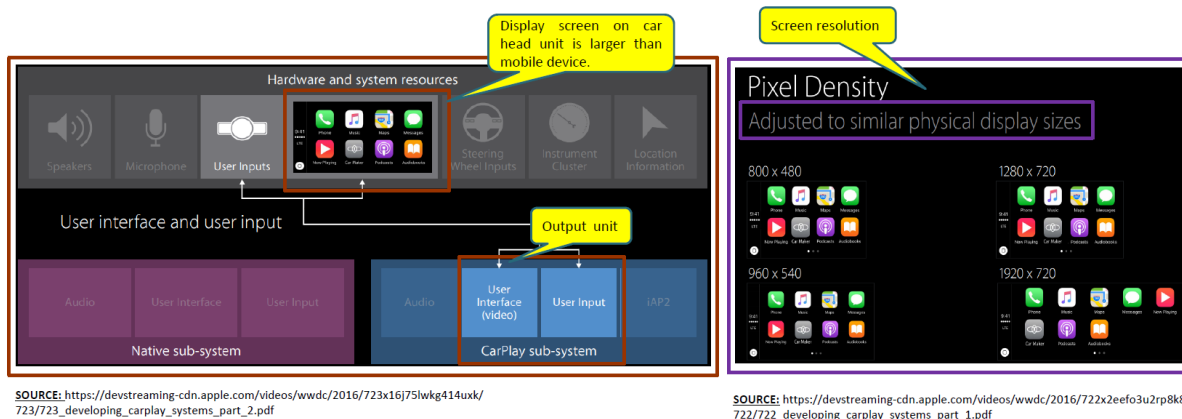
a video output unit configured to display the video information in the form of a visual image, the video output unit having a display screen larger than the portable device, wherein the screen resolution information includes information regarding the screen resolutions supported by the video output unit; and

Defendant provides a video output unit configured to display the video information in the form of a visual image, the video output unit having a display screen larger than the portable device, wherein the screen resolution information includes information regarding the screen resolutions supported by the video output unit; and

The video output unit displays the video information output by the pixel information processing unit. The video output unit can be implemented with a liquid crystal display (LCD) panel or an organic light emitting diode (OLED) display panel. *See* '461 patent Col. 3 *l.* 4-8.

The video output unit outputs the video information received from the pixel information processing unit in the form of a visual image. The video output unit can be implemented with a liquid crystal display (LCD) panel or an organic light emitting diode (OLED) panel. Preferably, the video output unit is provided with a display screen larger than that of the portable device. *See* '461 patent Col. 4 *l.* 19-25.

a video output unit configured to display the video information in the form of a visual image, the video output unit having a display screen larger than the portable device, wherein the screen resolution information includes information regarding the screen resolutions supported by the video output unit; and



a key advisor unit configured to extract the supportable key information from the connection establishment response message and output the supportable key information to the video output unit, wherein the key advisor unit displays on a display screen of the video output unit, if a key configuration mode is activated, keys of the portable device and is configured to receive corresponding keys through the key input unit, and

Defendant provides a key advisor unit configured to extract the supportable key information from the connection establishment response message and output the supportable key information to the video output unit, wherein the key advisor unit displays on a display screen of the video output unit, if a key configuration mode is activated, keys of the portable device and is configured to receive corresponding keys through the key input unit, and wherein key values corresponding to the keys of the key input unit match key values of the portable device, and wherein the video information is video data adjusted in resolution by the portable device for the video output unit on the basis of the screen resolution information, and the input key value is mapped to one of key values indicated by the supportable key information of the portable device.

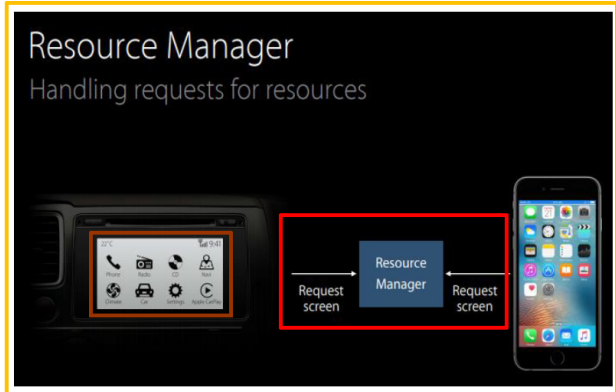
The key advisor unit and key input unit are each comprised of software utilizing a microprocessor and storage means on a computer to perform their respective steps as outlined in the specification. The specification describes an algorithm to transform a general-purpose microprocessor to a special purpose computer so that a person of ordinary skill in the art can implement the disclosed algorithm to achieve the claimed function. A disclosed algorithm can include steps for achieving a result as shown in the '461 patent specification.

In at least one embodiment, the key adviser unit extracts supportable key information from the connection establishment response signal and transmits the supportable key information to the video output unit so as to be displayed on the screen. *See* '461 patent Col. 3 *l.* 9-12. The key input unit is provided with a plurality of keys for generating input key commands. The input key commands are generated by matching the key values input through the key input unit to the key values of the portable device with reference to the supportable key information. *See* '461 patent Col. 3 *l.* 13-17.

In at least one embodiment, the key advisor unit extracts compatible key information from the connection establishment response signal and displays the compatible key information on the display screen of the video output unit. The key advisor unit displays a key among the keys provided by the compatible key information, which is matched to the key input through the key input unit, on the display screen of the video output unit. If a set of keys are selected by through the key input unit, the key advisor unit displays the keys supported by the portable device on the display screen of the video output unit. If a key is input through the key input unit, the key advisor unit matches the key value of the input key to a key value of the corresponding key supported by the portable device. *See* '461 patent Col. 4 *l.* 37-46. The key input unit is provided with a plurality of keys for generating input key values. The input key commands are generated by matching the key values input through the key input unit to the key values of the portable device with reference to the supportable key information. *See* '461 patent Col. 3 *l.* 13-17.

wherein key values corresponding to the keys of the key input unit match key values of the portable device, and wherein the video information is video data adjusted in resolution by the portable device for the video output unit on the basis of the screen resolution information, and the input key value is mapped to one of key values indicated by the supportable key information of the portable device.

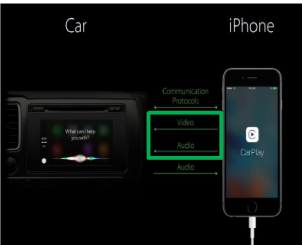
and wherein key values corresponding to the keys of the key input unit match key values of the portable device, and wherein the video information is video data adjusted in resolution by the portable device for the video output unit on the basis of the screen resolution information, and the input key value is mapped to one of key values indicated by the supportable key information of the portable device.



SOURCE: <https://www.idownloadblog.com/2014/04/19/app-store-guide/>



SOURCE: https://devstreaming-cdn.apple.com/videos/wwdc/2016/722x2eefo3u2rp8k8qs/722/722_developing_carplay_systems_part_1.pdf



SOURCE: https://devstreaming-cdn.apple.com/videos/wwdc/2016/722x2eefo3u2rp8k8qs/722/722_developing_carplay_systems_part_1.pdf

and wherein key values corresponding to the keys of the key input unit match key values of the portable device, and wherein the video information is video data adjusted in resolution by the portable device for the video output unit on the basis of the screen resolution information, and the input key value is mapped to one of key values indicated by the supportable key information of the portable device.

Touchscreen			
Users can interact with a CarPlay app by performing gestures on the car's built-in touchscreen display. CarPlay supports both low-fidelity and high-fidelity touchscreen displays. High-fidelity screens have lower finger-tracking latency than low-fidelity screens, and therefore support more gestures. Depending on the display, CarPlay apps can respond to single-finger gestures, as follows.			
Gesture	Usage	Low-fidelity screen	High-fidelity screen
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Touch and hold	Activates a control for a period of time. For example, touching and holding the Next Track button in the Music app fast-forwards the currently playing track.	●	●
Flick	Scrolls or pans quickly.		●
Drag	Moves an element from side-to-side or drags an		●

SOURCE: <https://developer.apple.com/design/human-interface-guidelines/carplay/interaction/touchscreen/>

35. Defendant's aforesaid activities have been without authority and/or license from Plaintiff.

36. To the extent 35 U.S.C. § 287 is determined to be applicable, Plaintiff is informed and believes its requirements have been satisfied with respect to the '504 and '461 patents.

37. Plaintiff is entitled to recover from Defendant the damages sustained by Plaintiff as a result of the Defendant's wrongful acts in an amount subject to proof at trial, 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

Plaintiff hereby requests a trial by jury pursuant to Rule 38 of the Federal Rules of Civil Procedure.

PRAYER FOR RELIEF

Plaintiff respectfully requests that the Court find in its favor and against the Defendant, and that the Court grant Plaintiff the following relief:

- A. A judgment in favor of Plaintiff that Defendant has infringed one or more of the claims, directly, jointly, and/or indirectly the '504 and '461 patents;
- B. A permanent injunction pursuant to 35 U.S.C. § 283, enjoining Defendant and their officers, directors, agents servants, affiliates, employees, divisions, branches, subsidiaries, parents, and all others acting in active concert therewith from infringement, inducing the infringement of, or contributing to the infringement of the '461 and '504 patents, or such other equitable relief the Court determines is warranted;
- C. An award to Plaintiff of damages adequate to compensate Plaintiff for the Defendant's acts of infringement together with pre-judgment and post-judgment interest; and an accounting of all damages not presented at trial;

D. That, should Defendant's acts of infringement be found to be willful from the time that Defendant became aware of the infringing nature of their actions, which is the time of filing of Plaintiff's Original Complaint at the latest, that the Court award treble damages for the period of such willful infringement pursuant to 35 U.S.C. § 284;

E. Any further relief that this Court deems just and proper.

Dated: February 21, 2019

Respectfully submitted,

DEVLIN LAW FIRM LLC

/s/ Timothy Devlin

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Dallas, TX 75240
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Facsimile: (972) 370-3559
Email: ahansley@hansleyfirm.com

**ATTORNEYS FOR PLAINTIFF
DALE PROGRESS LTD.**