KILPATRICK TOWNSEND & STOCKTON LLP
David E. Sipiora (State Bar No. 124951)
dsipiora@kilpatricktownsend.com
Kristopher L. Reed (State Bar No. 235518)
kreed@kilpatricktownsend.com
Matthew C. Holohan (State Bar No. 239040)
mholohan@kilpatricktownsend.com
1400 Wewatta Street, Suite 600
Denver, CO 80202
Telephone: 303.571.4000
Facsimile: 303.571.4321

Darius C. Samerotte (State Bar No. 296252)
DSamerotte@kilpatricktownsend.com
Two Embarcadero Center, Suite 1900
San Francisco, CA 94111
Telephone: 415.576.0200
Facsimile: 415.576.0300

Attorneys for Plaintiff THUNDER POWER NEW ENERGY VEHICLE DEVELOPMENT COMPANY LIMITED

UNITED STATES DISTRICT COURT

FOR THE NORTHERN DISTRICT OF CALIFORNIA

THUNDER POWER NEW ENERGY VEHICLE DEVELOPMENT COMPANY LIMITED,

Plaintiff,

v.

BYTON NORTH AMERICA CORPORATION, NANJING BYTON ELECTRIC VEHICLE CO., LTD., AND BYTON GMBH,

Defendants.

Case No.

COMPLAINT FOR PATENT INFRINGEMENT

DEMAND FOR JURY TRIAL

Plaintiff Thunder Power New Energy Vehicle Development Company Limited ("Thunder Power") files this Complaint for Patent Infringement relating to several U.S. patents as identified below (collectively, the "Patents-in-Suit") and alleges as follows:

PARTIES

1. Plaintiff Thunder Power is a corporation formed under the laws of Hong Kong, with its principal place of business at Room 904, 1 Lyndhurst Terrace, Central, Hong Kong.

2. Defendant Nanjing Byton Electric Vehicle Co., Ltd. ("Byton-China") is a corporation formed under the laws of China, with its principal place of business at 2f, A3 Building, Maple Science Park, Economic and Technological, Nanjing 210038 Jiangsu China.

3. Defendant Byton North America Corporation ("Byton-America") is a subsidiary of Byton-China and a corporation incorporated in Delaware, with its principal place of business at 4201 Burton Drive, Santa Clara, CA 95054. Byton-America is authorized to do business in the State of California and has been assigned the Entity Number C3964352 by the California Secretary of State. Byton-America may be served with process by serving its registered agent, C T Corporation System, located at 818 West Seventh St. Ste. 930, Los Angeles, CA 90017.

4. On information and belief, Byton-America is the U.S. manager or agent for Byton-China.

5. Defendant Byton GmbH ("Byton-Germany") is a subsidiary of Byton-China and a GmbH formed under the laws of Germany, with its principal place of business at Am Lenzenfleck 7-9, 85737 Ismaning Bayern Germany.

6. On information and belief, Byton-China and its subsidiaries, Byton-America and Byton-Germany, (collectively, "BYTON") acted in concert with regard to the allegations set forth in this Complaint and, therefore, the conduct described herein is fairly attributable to any or all defendants.

JURISDICTION AND VENUE

7. Thunder Power brings this civil action for patent infringement pursuant to the Patent Laws of the United States, 35 U.S.C. § 1 *et. seq.*, including 35 U.S.C. §§ 271, 281–285. This Court has subject matter jurisdiction over this action pursuant to 28 U.S.C. §§ 1331 and

1338.

8. On information and belief, BYTON transacts and conducts business in this District and the State of California, and is subject to the personal jurisdiction of this Court. On information and belief, BYTON has minimum contacts within the State of California and this District and has purposefully availed itself of the privileges of conducting business in the State of California and in this District by, *inter alia*, maintaining its regional headquarters in this District. Thunder Power's causes of action arise directly from BYTON's business contacts and other activities in the State of California and in this District.

9. On information and belief, BYTON solicits customers, and uses, advertises, and promotes an electric vehicle that infringes one or more claims of the Patents-in-Suit, in the State of California and this District.

10. For example, as shown in the following screenshot from the Twitter account of automotive journalist Cyrus Behram Dhabnar, BYTON has used and advertised its infringing vehicle at its U.S. headquarters in Santa Clara, California (https://twitter.com/CyrusDhabhar/status/964621473943080965 (retrieved May 24, 2018)):

11. BYTON also allows potential customers to reserve their "priority to place an order and . . . be one of the first to receive your BYTON" once pre-ordering is available. (*see* https://www.byton.com/reserve.html (retrieved May 24, 2018)).

12. On information and belief, BYTON, directly and/or through intermediaries, has committed acts of infringement, both directly and indirectly, within this District and the State of California by, *inter alia*, using and/or importing products that infringe one or more claims of the Patents-in-Suit.

13. Venue is proper in this district under 28 U.S.C. § 1400(b).

INTRADISTRICT ASSIGNMENT

14. This is an intellectual property action and is therefore assigned on a district-wide basis pursuant to Civil L.R. 3-2(c).

THE PATENTS-IN-SUIT

15. On January 17, 2017, the United States Patent and Trademark Office ("USPTO") duly and legally issued U.S. Patent No. 9,547,373, titled "Vehicle Operating System Using Motion Capture," to inventors Jen-Chieh Hsiao and Yong-Syuan Chen (the "'373 Patent"). A true and correct copy of the '373 Patent is attached as **Exhibit A** to this Complaint.

16. On February 7, 2017, the USPTO duly and legally issued U.S. Patent No. 9,563,329, titled "Interchangeable Display of Information Panels on a Dashboard," to Yong-Syuan Chen and Jen-Chieh Hsiao (the "'329 Patent"). A true and correct copy of the '329 Patent is attached as **Exhibit B** to this Complaint.

17. On February 7, 2017, the USPTO duly and legally issued U.S. Patent No. 9,561,724, titled "Interchangeable Display of Information Panels on a Dashboard," to Yong-Syuan Chen and Jen-Chieh Hsiao (the "'724 Patent"). A true and correct copy of the '724 Patent is attached as **Exhibit C** to this Complaint.

18. As noted above, collectively, the '373, '329, and '724 Patents are the "Patents-in-Suit."

19. By assignment, Thunder Power owns all right, title, and interest in and to the Patents-in-Suit, including, but not limited to, the right to enforce the Patents-in-Suit and collect damages for past and future infringements and seek injunctive relief regarding future infringements.

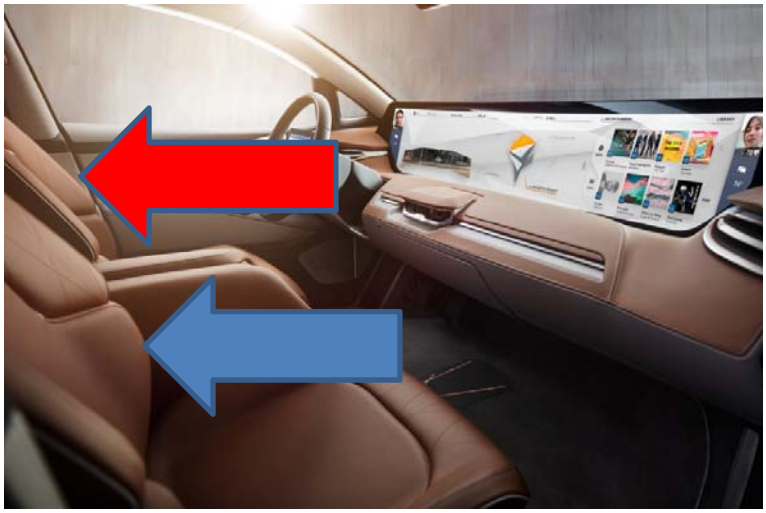
COUNT 1

(Infringement of U.S. Patent No. 9,547,373)

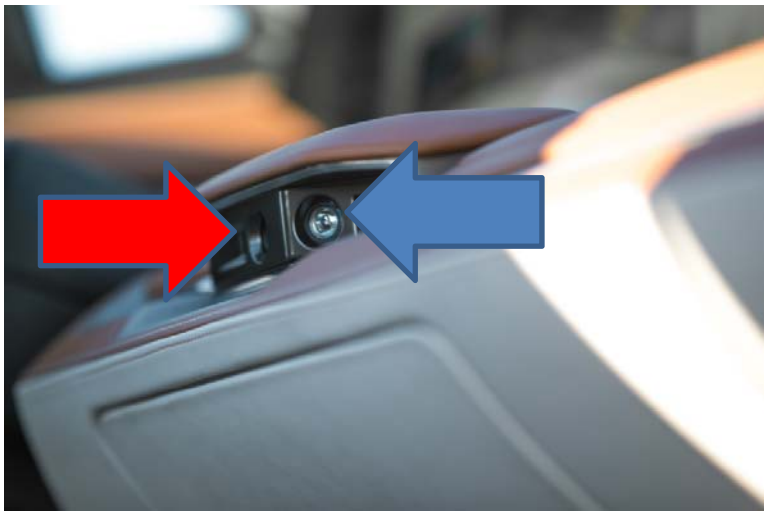
20. Thunder Power incorporates by reference each and every allegation in the preceding paragraphs.

21. BYTON has and is using and/or importing into the United States vehicle operating systems that are adapted to or capable of operating a vehicle using motion capture (e.g., gestures), including but not limited to the "Gesture Control" (aka "Air Touch") system in the BYTON Concept car, as revealed at the 2018 Consumer Electronics Show and advertised at https://www.byton.com (retrieved May 24, 2018). Gesture Control infringes, either literally or under the doctrine of equivalents, at least Claim 1 of the '373 Patent.

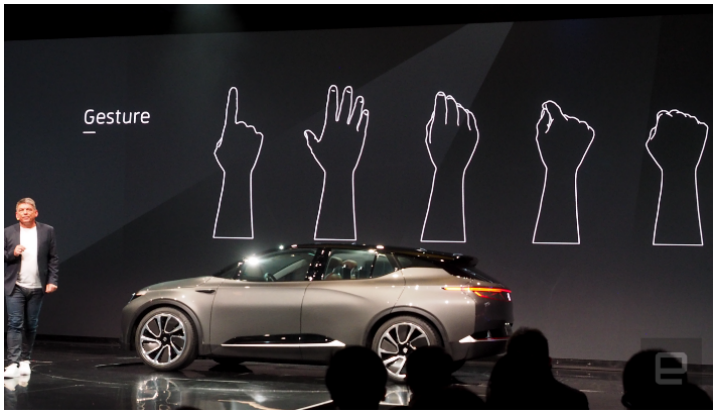
22. Gesture Control is a vehicle operating system for operating a vehicle including a driving seat for a vehicle driver (red arrow) and at least one passenger seat for passengers (blue arrow):



https://mucftp.byton.com:5001/fsdownload/JKZ5qbNNx/Byton_Press_Europe (Byton Concept → Pictures → Interior → BYTON Concept_Interior_Entertainment) (retrieved May 24, 2018) (emphasis added). Gesture Control includes camera devices for capturing at least one of images of gestures of the driver (red arrow) and images of gestures of a passenger (blue arrow):



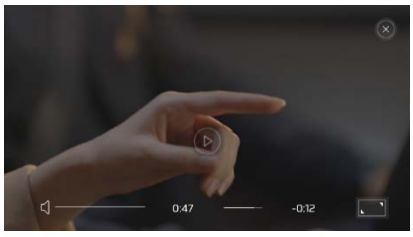
https://mucftp.byton.com:5001/fsdownload/JKZ5qbNNx/Byton_Press_Europe (Byton Concept → Pictures → Interior → BYTON Concept_Interior_Detail_10) (retrieved May 24, 2018) (emphasis added). Gesture Control further includes a storage device in the BYTON Concept car for storing operating signals as five preset gestures (shown below):



https://www.engadget.com/2018/01/07/byton-unveils-its-first-ev-with-a-focus-on-in-car-experience/ (retrieved May 24, 2018). Gesture Control further includes a processing device configured to perform various operations related to Gesture Control. In particular, the processing

device is configured to control the two cameras (above) aimed at the driver and passenger to simultaneously or substantially simultaneously capture gesture action images. The processing device is further configured to convert the captured gesture action images into corresponding operating signals according to the operating signals corresponding to the gesture actions stored in the storage device as shown in the following video where the driver uses a pointing gesture and an "OK" gesture to point to and select an icon:

https://www.youtube.com/watch?v=v30SNJYpE7E (4:25) (retrieved May 24, 2018). While the preceding example shows the driver controlling the display using various gestures, the BYTON display also converts the captured gesture action images of the passenger into corresponding operating signals according to the operating signals corresponding to the gesture actions stored in the storage device. The following screenshots are taken from a video where the female passenger uses various gestures to select and move items on the display:



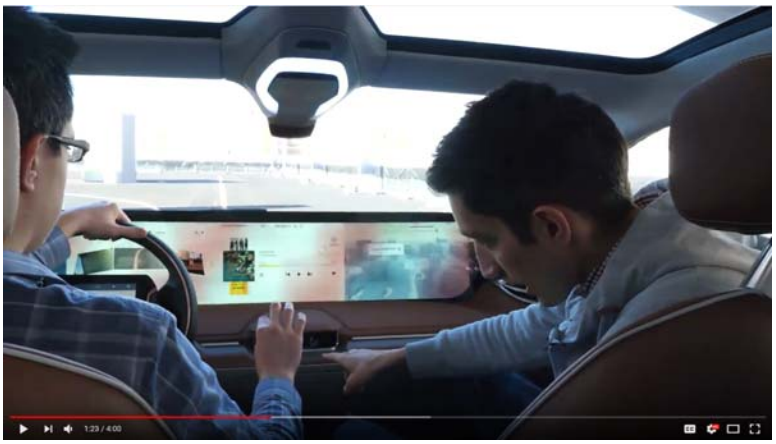
https://www.byton.com/experience.html ("Share fun on the go.") (0:47, 0:49, 0:52) (retrieved May 24, 2018).

The processing device is further configured to determine a first operational signal is from a gesture action image for the driver and determine a second operational signal is from a gesture

action image for the passenger, the first and second operational signals both for operating a same component of the vehicle, and the processing device is also operable to determine whether the first operation signal is consistent with the second operation signal. Indeed, BYTON touts that its car can discern the identity of its passengers through face recognition, advertising that "Your BYTON understands you like a trusted friend. *It recognizes you through face recognition, talks to you and adapts to your needs*. With a simple swipe of your fingers, you can intuitively operate the touch displays. And as communication is never a one-way street, *BYTON Gesture Control also responds to your hand gestures*. All in all, we give you five dimensions of control." https://www.byton.com/technology.html (retrieved May 24, 2018) (emphasis added). The BYTON car's capability of recognizing drivers and passengers through face recognition indicates that its gesture control technology can likewise discern whether a gesture command/operational signal originates from the driver or the passenger. And in the preceding examples, both driver and passenger used gesture controls to operate the same component of the vehicle—the display.

Additionally, BYTON advertises that its car can "distinguish[] between driver and passenger" for safety and security. https://www.youtube.com/watch?v=xrLGMY2zp8E (1:17-22) (explaining that, "for your safety and security, your Byton distinguishes between driver and passenger") (retrieved May 24, 2018). Such capability indicates that the car can distinguish between driver and passenger when both individuals provide simultaneous yet conflicting gesture commands—an event that can lead to safety concerns. The processing device is capable of determining whether the first operation signal is consistent with the second operation signal because, as an example, the BYTON car includes at least two camera devices aimed in different directions—one near the driver, the other closer to the passenger—thereby requiring the need to determining consistency (or inconsistency) of operational signals.

The processing device is further configured to select the first operational signal as the operating signal and discard the second operational signal by virtue of the first operational signal being from the driver in response to the determination that first operation signal is not consistent with the second operation signal—as shown in the following video where the driver uses an OK gesture, overriding the passenger's use of a conflicting pointing gesture:



https://www.youtube.com/watch?v=ckqDIoUCRmk (1:23) (retrieved May 24, 2018). The processing device is further configured to send out the operating signals. Gesture Control further includes execution devices configured to receive the operating signals sent by the processing device, and to execute operations corresponding to the operating signals—as shown in the image from the video referenced above where Gesture Control then sends and the BYTON Concept executes the OK gesture to select an item on the screen.

23. The infringement of the '373 Patent by BYTON will continue unless enjoined by this Court.

24. The infringing activities by BYTON have caused and will continue to cause irreparable injury to Thunder Power for which there exists no adequate remedy at law.

COUNT 2

(Infringement of U.S. Patent No. 9,563,329)

25. Thunder Power incorporates by reference each and every allegation in the preceding paragraphs.

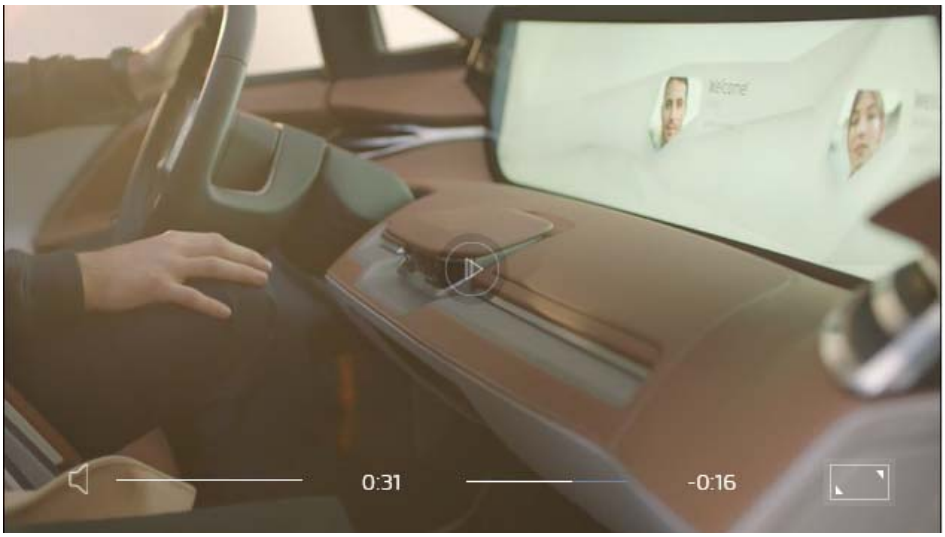
26. BYTON has and is using and/or importing into the United States an information display system in a transportation apparatus (e.g., a car), including but not limited to the "Shared Experience Display" system in the BYTON Concept car, as revealed at the 2018 Consumer Electronics Show and advertised at https://www.byton.com (retrieved May 24, 2018). The Shared Experience Display infringes, either literally or under the doctrine of equivalents, at least Claim 1 of the '329 Patent.

27. The Shared Experience Display is an information display system in a transportation apparatus. The Shared Experience Display includes a dashboard screen that occupies at least a portion of a dashboard of the transportation apparatus, wherein the dashboard screen is capable of graphically displaying multiple information panels at respective positions on the dashboard screen, the information panels being displayed separate and independent from each other on the dashboard screen, wherein the information panels include a first information panel and a second information panel—as shown below with the Shared Experience Display spanning almost the entire dashboard and graphically displaying multiple information panels, two of which are highlighted below in red and blue rectangles:

A "shared experience display", or SED, replaces the car's interior dashboard, showing content through multiple display screens.

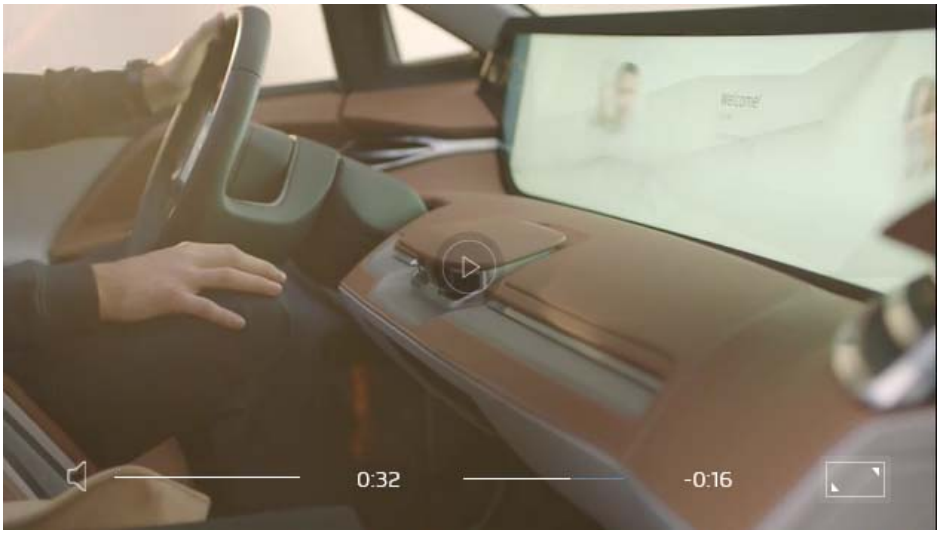
This content can be controlled by the driver via a touch-wheel, and shared with the other passengers.

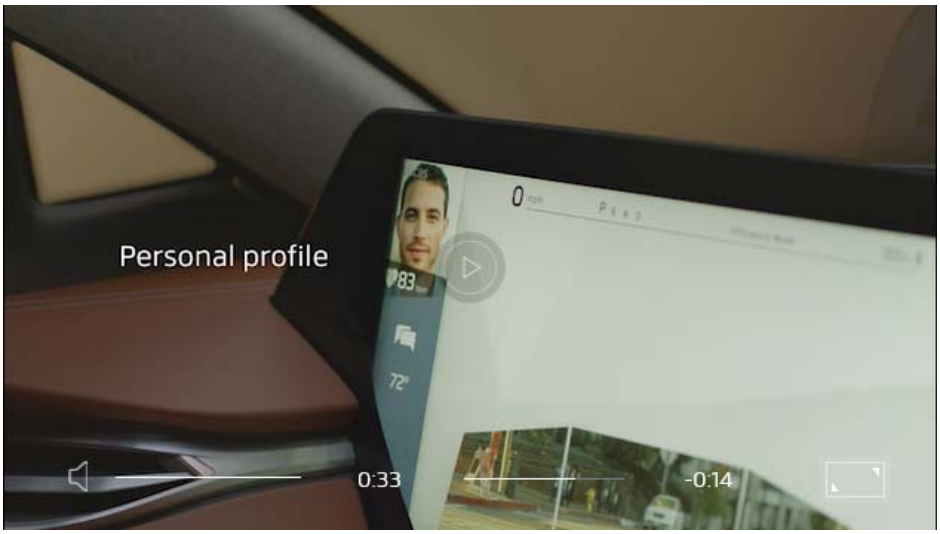
https://www.dezeen.com/2018/01/09/byton-siv-electric-driverless-suv-facial-recognition-gesture-controls-ces-2018/ (retrieved May 24, 2018) (emphasis added). The Shared Experience Display further includes a processor. The processor is configured to display the first information panel at a first position on the dashboard screen and display the second information panel at a second position on the dashboard screen—as shown below where an image of the male driver (this image constituting an information panel, which provides the driver with information about their heart rate) is displayed on the left and the female passenger on the right, and where these image positions would reverse when the driver swapped seats with the passenger:



https://www.byton.com/experience.html (titled "Every BYTON feels like your BYTON") (0:31) (retrieved May 24, 2018). The processor is further configured to receive a user signal indicating a request to switch the display positions of the first and second information panels on the dashboard screen. The processor is further configured to generate a switch instruction to switch the display of first and second information panels in accordance with the received user signal. The processor is further configured to display the first information panel at the second position on the dashboard screen and display the second information panel at the first position on the dashboard screen in accordance with the generated switch instruction—as shown above where the user signal is the driver and passenger switching seats. The processor is further configured to receive a user signal indicating a request to duplicate the display of the first information panel at a third display position on the dashboard screen. The processor is further configured to display the first information panel at the third display position on the dashboard screen in response to the user signal being received—as shown in the video below where a passenger, with his image originally displayed on a first information panel in the center right, moves to the driver's seat, such that his image displays on a second information panel in the center left, before then appearing in a third display position, as shown, to the far left:


0:31
-0:16


0:32
-0:16


Personal profile
0:33
-0:14

https://www.byton.com/experience.html (titled "Every BYTON feels like your BYTON") (0:31–0:33) (retrieved May 24, 2018).

28. The infringement of the '329 Patent by BYTON will continue unless enjoined by this Court.

29. The infringing activities by BYTON have caused and will continue to cause irreparable injury to Thunder Power for which there exists no adequate remedy at law.

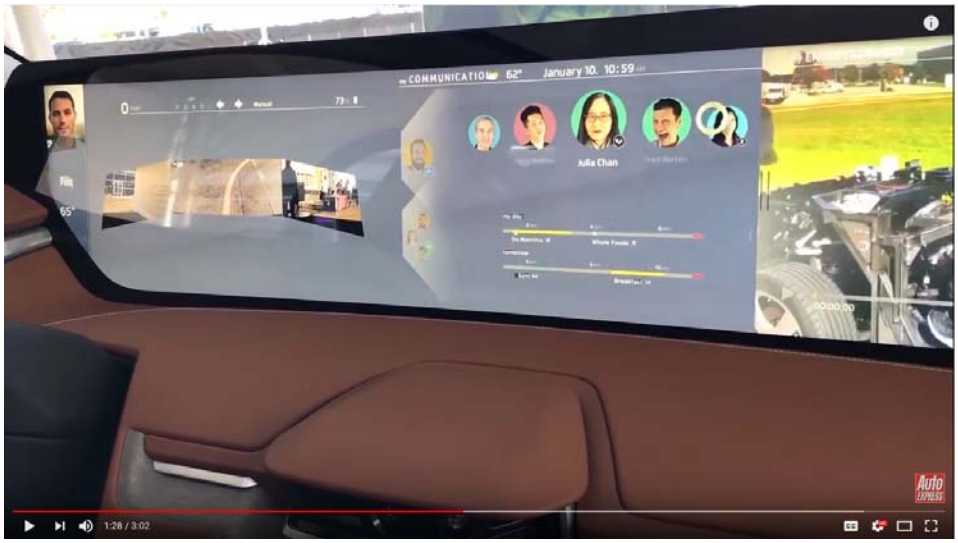
COUNT 3

(Infringement of U.S. Patent No. 9,561,724)

30. Thunder Power incorporates by reference each and every allegation in the preceding paragraphs.

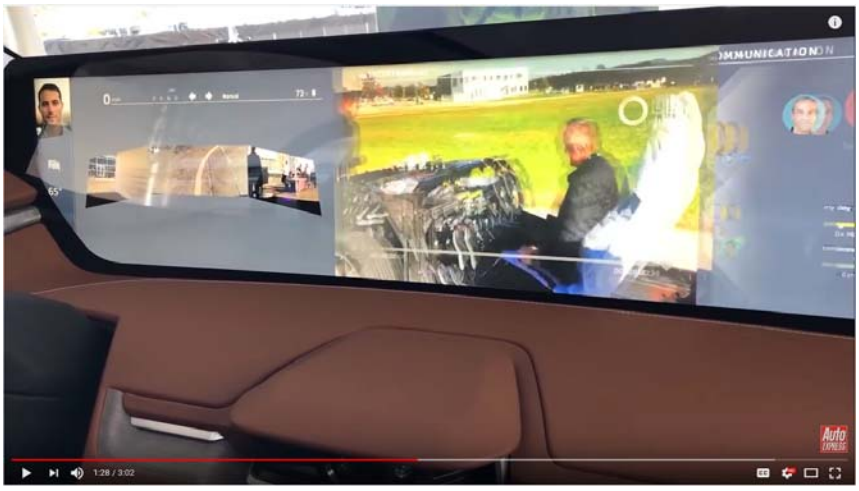
31. BYTON has and is using and/or importing into the United States an information display system in a transportation apparatus (e.g., a car), including but not limited to the "Shared Experience Display" system in the BYTON Concept car, as revealed at the 2018 Consumer Electronics Show and advertised at https://www.byton.com (retrieved May 24, 2018). The Shared Experience Display infringes, either literally or under the doctrine of equivalents, at least Claim 1 of the '724 Patent.

32. The Shared Experience Display is an information display system in a transportation apparatus. *See* https://interestingengineering.com/ces-2018-kicks-off-as-byton-unveils-a-smart-suv-with-a-beautiful-50-inch-digital-dashboard (retrieved May 24, 2018). The Shared Experience Display includes a liquid crystal display ("LCD") screen that occupies at least a portion of a dashboard of the transportation apparatus, wherein the LCD screen is capable of graphically displaying multiple information panels at respective positions on the LCD screen, the information panels being displayed separate and independent from each other on the LCD screen, wherein the information panels include a first information panel and a second information panel—specifically as a 49-inch curved LCD running across the dashboard and as shown in the following screenshot with multiple independent panels:

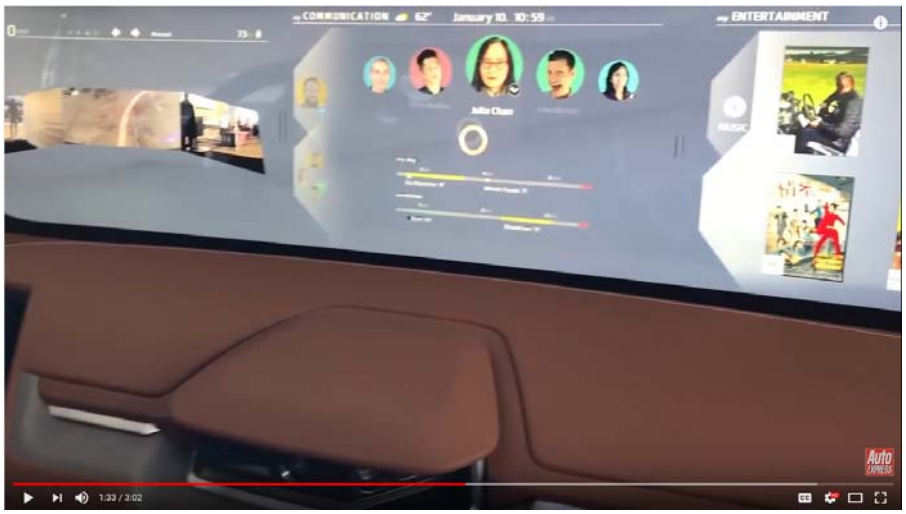


https://www.youtube.com/watch?v=7llE4gE2m9M (1:28) (retrieved May 24, 2018). The Shared Experience Display further includes a processor. The processor is configured to display the first information panel at a first position on the LCD screen and display the second information panel at a second position on the LCD screen—shown above with a first information panel (the "Entertainment" menu) on the right side of the screen and a second information panel (the "Communication" menu) in the center of the screen. The processor is further configured to receive a user signal indicating a request to switch the display positions of the first and second information panels on the LCD screen. The processor is further configured to generate a switch instruction to switch the display of first and second information panels in accordance with the received user signal—as shown below where the driver uses a hand gesture that generates an instruction to switch the display positions:

https://www.youtube.com/watch?v=7llE4gE2m9M (1:20) (retrieved May 24, 2018). The processor is further configured to display the first information panel at the second position on the LCD screen and display the second information panel at the first position on the LCD screen in accordance with the generated switch instruction—shown below where the Entertainment and Communication menus swap places:



https://www.youtube.com/watch?v=7llE4gE2m9M (1:28) (retrieved May 24, 2018). The processor is further configured to generate a switch-back instruction to switch back the display positions of the first information panel and second information panel to their previous display positions prior to the switching after a predetermined time period—as shown below where a switch-back instruction again swaps the Entertainment and Communication menus after a predetermined time period (about one second in the video):



https://www.youtube.com/watch?v=7llE4gE2m9M (1:33) (retrieved May 24, 2018).

33. The infringement of the '724 Patent by BYTON will continue unless enjoined by this Court.

34. The infringing activities by BYTON have caused and will continue to cause irreparable injury to Thunder Power for which there exists no adequate remedy at law.

PRAYER FOR RELIEF

WHEREFORE, Thunder Power requests that judgment be entered in its favor and against BYTON as follows:

A. Entering judgment declaring that BYTON has directly infringed literally and/or under the doctrine of equivalents, the Patents-in-Suit in violation of 35 U.S.C. § 271;

B. Issuing a permanent injunction enjoining BYTON, its officers, agents, subsidiaries and employees, and those in privity or in active concert with them, from further activities that constitute infringement of the Patents-in-Suit, within the State of California and across the United States or, in the alternative, setting an ongoing royalty to compensate Thunder Power for BYTON's ongoing infringement;

C. Ordering that Thunder Power be awarded damages in an amount no less than a reasonable royalty for each asserted patent arising out of BYTON's infringement of the Patents-in-Suit, together with costs, prejudgment, and post-judgment interest;

D. Declaring this an exceptional case under 35 U.S.C. § 285 and awarding attorneys' fees and trebling of damages; and

E. Awarding Thunder Power such other costs and further relief as the Court deems just and proper.

DEMAND FOR JURY TRIAL

Pursuant to Rule 38 of the Federal Rules of Civil Procedure, Thunder Power demands a trial by jury on all issues so triable.

DATED: May 24, 2018

Respectfully submitted,

KILPATRICK TOWNSEND & STOCKTON LLP

By: */s/ Matthew C. Holohan*

David E. Sipiora (State Bar No. 124951)
dsipiora@kilpatricktownsend.com
Kristopher L. Reed (State Bar No. 235518)
kreed@kilpatricktownsend.com
Matthew C. Holohan (State Bar No. 239040)
mholohan@kilpatricktownsend.com
1400 Wewatta Street, Suite 600
Denver, CO 80202
Telephone: 303.571.4000
Facsimile: 303.571.4321

Darius C. Samerotte (State Bar No. 296252)
DSamerotte@kilpatricktownsend.com
Two Embarcadero Center, Suite 1900
San Francisco, CA 94111
Telephone: 415.576.0200
FACSIMILE: 415.576.0300

Attorneys for Plaintiff THUNDER POWER NEW ENERGY VEHICLE DEVELOPMENT COMPANY LIMITED

68477617V.1