

**IN THE UNITED STATES DISTRICT COURT
FOR THE WESTERN DISTRICT OF TEXAS
AUSTIN DIVISION**

IQAR INC. F/K/A/ INVENTLY
AUTOMOTIVE, INC.,

Plaintiff,

v.

TESLA, INC.,

Defendant.

§ Case No. 1:23-cv-00694
§
§ **COMPLAINT FOR PATENT**
§ **INFRINGEMENT**
§
§ **Jury Trial Demanded**
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COMPLAINT FOR PATENT INFRINGEMENT

Plaintiff iQar Inc. (formerly known as Invently Automotive, Inc.) (“iQar” or “Plaintiff”) hereby asserts claims for infringement of United States Patent Nos. 7,925,426; 8,972,161; 10,829,002; 10,850,616; and 10,882,399 (the “Patents-In-Suit”; attached hereto as Exhibits 1-5, respectively) against Defendant Tesla, Inc. (“Tesla” or “Defendant”), and alleges as follows:

NATURE OF THE ACTION

1. This is a civil action for infringement under the patent laws of the United States of America, 35 U.S.C. § 1 *et seq.*
2. Each Patent-In-Suit was duly and lawfully issued by the United States Patent and Trademark Office. The Patents-In-Suit are valid and enforceable. iQar owns all substantial rights for the Patents-In-Suit.
3. Tesla has infringed and continues to directly and indirectly infringe one or more claims of the Patents-In-Suit by making, using, offering to sell, and selling within the United States, and importing into the United States, including in this District, Tesla vehicles including, but not

limited to, the Model S, Model 3, Model X, and Model Y (collectively, the “Accused Tesla Vehicles”). iQar seeks injunctive relief and monetary damages.

THE PARTIES

4. Plaintiff iQar Inc. is a Delaware corporation with its principal place of business at 1525 Miramonte Ave. #3313, Los Altos, CA 94024-9991. iQar is the owner of the Patents-In-Suit. iQar holds all substantial rights, title, and interest in and to the Asserted Patents.

5. Pursuant to Fed. R. Civ. P. 11(b)(3), Defendant Tesla, Inc. is a Delaware corporation with its principal place of business at 1 Tesla Road, Austin, Texas 78725. Tesla may be served with process through its registered agent, CT Corporation, at 1999 Bryan St., Suite 900, Dallas, Texas 75201-3136. Tesla is registered to do business in the State of Texas and has been since at least 2011.

6. Tesla directly and/or indirectly develops, designs, manufactures, distributes, markets, offers to sell, sells, and/or imports the Accused Tesla Vehicles in/into the United States, including in the Western District of Texas and this Division, and otherwise purposefully directs infringing activities to this District and this Division in connection with the Tesla Accused Products.

JURISDICTION AND VENUE

7. This Court has original jurisdiction over the subject matter of this patent litigation action pursuant to 28 U.S.C. §§ 1331 and 1338.

8. This Court has both general and specific personal jurisdiction over Tesla.

9. Pursuant to Fed. R. Civ. P. 11(b)(3), Tesla has: (1) availed itself of the rights and benefits of the laws of the State of Texas; (2) transacted, conducted, and/or solicited business and engaged in a persistent course of conduct in the State of Texas (and in this District); (3) derived substantial revenue from the manufacture, sale and/or use of Accused Tesla Vehicles in the State of Texas (and in this District); (4) purposefully directed activities (directly and/or through intermediaries), such as making, shipping, distributing, offering for sale, selling, and/or advertising

Accused Tesla Vehicles at residents of the State of Texas (and residents in this District); (5) delivered Accused Tesla Vehicles into the stream of commerce with the expectation that they will be used and/or purchased by consumers; and (6) committed acts of patent infringement in the State of Texas (and in this District).

10. Pursuant to Fed. R. Civ. P. 11(b)(3), this Court also has personal jurisdiction over Tesla because Tesla is registered to do business in the State of Texas and has one or more regular and established places of business in the Western District of Texas at which Tesla makes, offers to sell, and sells Accused Tesla Vehicles.

11. Pursuant to Fed. R. Civ. P. 11(b)(3), Tesla is subject to this Court's general and specific personal jurisdiction pursuant to the Texas Long Arm Statute and due process because Tesla conducts substantial business in this forum, including: (i) making, using, selling, offering for sale, and/or importing Accused Tesla Vehicles with technology, components, and/or features that infringe the Patents-in-Suit; and (ii) regularly conducting and soliciting business, engaging in other persistent courses of conduct, and deriving substantial revenue from goods and services provided to citizens and residents in Texas and in this District.

12. Tesla is also "at home" in this District, *see Daimler AG v. Bauman*, 571 U.S. 117, 127-30 (2014), because Tesla has admitted that its principal place of business is in this District. *See SARE, Plaintiff, v. TESLA, INC., et al.*, No. 222CV00547JAMCKD, 2022 WL 2817422, at *2 (E.D. Cal. July 19, 2022).

13. Venue is proper in this District under the provisions of 28 U.S.C. § 1400(b) because, as noted above, Tesla has committed acts of infringement in this district and has one or more regular and established places of business in this district. Pursuant to Fed. R. Civ. P. 11(b)(3), Tesla is registered to do business in the State of Texas, has its corporate headquarters and principal place of business in the State of Texas (and in this District), and has transacted business in the State of Texas (and in this District).

14. Pursuant to Fed. R. Civ. P. 11(b)(3), venue is proper in this District because in addition to its corporate headquarters, Tesla also maintains several permanent physical places

within this District from which it conducts business relating to the Accused Tesla Vehicles. For example, Tesla has stores and service centers in this District at least at the following locations: 500 E St Elmo Road, Austin, Texas 78745; 12845 Research Boulevard, Austin, Texas 78759; 11600 Century Oaks Terrace, Austin, Texas 78758; 7825 Helen of Troy Drive, El Paso, Texas 79912; 5865 E Hwy 290 Fredericksburg, Texas 78624; 23011 IH-10 West, San Antonio, Texas 78257; and 8320-8434 Airport Boulevard, San Antonio, Texas 78216.

15. Tesla has admitted that venue is proper in this district for at least one other patent case. *See. e.g., Charge Fusion Techs., LLC v. Tesla, Inc.*, No. 6:21-CV-1078-ADA.

16. The Austin Division is an appropriate venue for this case because, pursuant to Fed. R. Civ. P. 11(b)(3), Tesla has its headquarters in this division at 1 Tesla Road, Austin, TX 78725 and Tesla manufactures in this division the accused products including the Accused Tesla Vehicles.

FACTUAL BACKGROUND

17. The Patents-In-Suit are inventions that were developed nearly twenty years ago, before November 2005, to overcome technological problems identified by Stephen Brown and the other inventors. At the time, vehicle navigation and efficient routing largely involved “MapQuesting” a destination on a desktop computer at home and physically printing directions on paper. Google Maps had just been released as a desktop application in 2005, and the iPhone was still two years away. GPS navigation systems in vehicles were rare and limited.

18. Steve Brown and the other inventors envisioned and set out to create technology ahead of the times. This resulted in, among other things, patents, such as the five Patents-In-Suit, that use data and various information sources to increase the efficiency of vehicles. This technology is particularly innovative and useful when applied in electric vehicles.

19. For example, a leading problem in the development and commercial adoption of electric vehicles was consumer concern about driving range. Colloquially known as “range

anxiety,” consumers hesitated adopting electric vehicles out of fear that the range of the vehicles would not meet their needs.

20. The automotive industry has long understood that range anxiety is a significant, if not the single largest, hurdle to the commercial success of electric vehicles. In 2010, a Cars.com industry survey found that “Most buyers [are] still wary of electric vehicles” with “54% most concerned with range anxiety in all electric vehicles” and another “43% said they drive too far to even consider [vehicles] with a 100-mile range.”¹

21. Pursuant to Fed. R. Civ. P. 11(b)(3), as it designed and sold the Accused Tesla Vehicles, Tesla understood that range anxiety could prevent an electric vehicle from being successful. For example, before the invention of the Patents-In-Suit, General Motors (“GM”) attributed the failure of its all electric EV-1 vehicle to range anxiety.² By the early 2010’s, GM primarily sold gas and gas-electric hybrids, such as the Chevrolet Volt. Joel Ewanick, Vice President of GM Marketing, explained that GM did not offer an electric vehicle because of “something we call ‘range anxiety,’ and it’s real” “We’ve been here before... We have first-hand experience with what the issues are.”³

22. Tesla’s Annual Reports at the time acknowledged the threat range anxiety posed to the company. For example, starting in 2010 and in each year since, Tesla’s yearly 10-K filings recognized that “[Tesla’s] future growth is dependent upon consumers’ willingness to adopt electric vehicles” and identified “the limited range over which electric vehicles may be driven on a single battery charge” as a factor that may influence the adoption of electric vehicles.⁴

23. The inventions claimed in the Patents-In-Suit provide technological solutions that directly address the issue of range anxiety. The inventors realized that the claimed use of sensor

¹ See <https://www.cars.com/articles/cars-com-survey-most-buyers-still-wary-of-electric-vehicles-1420663207303/>

² See <https://abc7chicago.com/archive/7578118/>

³ See <https://jalopnik.com/how-gm-will-use-fear-to-sell-you-a-chevy-volt-5626306>

⁴ See <https://www.sec.gov/Archives/edgar/data/1318605/000119312511054847/d10k.htm>

data and other information could increase the efficiency and range of an electric vehicle by determining the speed at which a vehicle should travel and/or the power that should be applied. And, the inventors understood that range anxiety could be further reduced by intelligently routing vehicles to charging stations or other destinations as appropriate.

24. In its marketing materials promoting the Accused Tesla Vehicles, Tesla claims “we’ve solved range anxiety.”⁵ Pursuant to Fed. R. Civ. P. 11(b)(3), Tesla’s solution is to infringe the Patents-In-Suit. For example, Tesla touts that its solution to range anxiety involves the collection and use of sensor and other data, such as “the route, the initial battery pack temperature, forecasted wind speed and direction so that we can more accurately predict your energy consumption.” *Id.* And, Tesla is relying on the inventions of Patents-In-Suit to predict a user’s destination when it determines the vehicle lacks sufficient charge for the entire route. As Tesla explains, “If I’m taking a road trip back home, I’ll just tell ‘navigate to Aspen, Colorado.’ It’ll find the superchargers I need to stop at along the route; take me along I-80 through Salt Lake City to Colorado.” *Id.* Tesla also confirms that part of its solution to range anxiety is to use the Accused Tesla Vehicles to collect and analyze sensor information, associate current conditions with route segments, and upload that information to a remote database. “[W]e know how full a particular [supercharger] site is and if there are people waiting at the site and we’ll automatically route you through charge stations with less congestion.” *Id.* Tesla’s use of the inventions in the Patents-In-Suit allowed Tesla to overcome consumer range anxiety and led to Tesla’s commercial success.

25. iQar informed Tesla of its power management and connected car patent portfolio at least as early as January 28, 2021, in a notice letter sent to Tesla’s Vice President of Legal Affairs. The letter identified each Patent-In-Suit and specifically highlighted the asserted ’426 Patent. Tesla has not ceased its infringement.

⁵ <https://twitter.com/i/status/1669442520315736064>

THE PATENTS-IN-SUIT

U.S. Patent No. 7,925,426

26. iQar is the owner of U.S. Patent No. 7,925,426 (the “’426 Patent”), entitled “Power Management Systems And Devices,” which was duly and legally issued by the United States Patent and Trademark Office (“USPTO”) on April 12, 2011. A copy of the ’426 Patent, is attached hereto as Exhibit 1.

27. The ’426 patent issued to inventors Martin Koebler, Nicole G. Goldstein, Stephen J. Brown, and Jason H. Harper from United States Patent Application No. 11/283,137, filed November 17, 2005.

28. The ’426 Patent relates generally to novel methods for managing the power consumption of an automotive vehicle, such as the Accused Tesla Vehicles. This includes, for example, calculating an optimized speed, calculating a probable speed, and determining an efficient speed based on the optimized speed and probable speed. *See* Ex. 1. The ’426 Patent further applies the calculated power corresponding to the efficient speed. *Id.*

29. The ’426 Patent is directed to solving problems associated with the need for increased efficiency in vehicles. As the patent describes, there were significant shortcomings in the art the time of the invention, namely that the management of energy efficiency in vehicles was imprecise and rudimentary for determining the manner vehicles should travel. As an example, a specific problem the ’426 Patent solves involves calculating an efficient speed for a vehicle to travel.

30. The ’426 Patent recognized that the speed that a user would like to travel at, or is limited to, such as a speed limit, could result in a speed that is not the most power efficient. On the other hand, an optimized speed calculated by minimizing power consumption may not meet other parameters.

31. The ’426 Patent solves these technological problems and shortcomings by segmenting a route and, for a segment, calculating optimized and probable speeds. The optimized speed could, for example, be calculated using information about the external environment and

operational status of the vehicle and could take into account user command inputs and operational parameters of the vehicle.

32. The '426 Patent, however, recognized that neither the optimized nor the calculated speed may be appropriate for the route segment. Thus, it teaches determining an efficient speed based at least in part on the optimized and calculated speeds.

33. The '426 Patent then teaches applying power corresponding to the efficient speed. This can improve the operation and efficiency of the vehicle in a way that reduces range anxiety.

34. The '426 Patent contains one independent claim and four total claims. Each claim of the '426 patent is valid, enforceable, and patent eligible under Section 101 of the Patent Act. Additionally, the claims of the '426 patent recite elements and steps that were novel and not routine or conventional at the time of the invention, either individually or in their recited order and combination. Claim 1 reads:

1. A method of managing the power consumption of a vehicle, comprising:
 - (a) a computer device receiving a route;
 - (b) said computer device segmenting said route into segment destinations; and
 - (c) said computer device for each of said segment destinations:
 - (i) calculating an optimized speed by minimizing power consumption over said segment destination, wherein information is (j) information about the external environment of a vehicle, (jj) information about the operational status of the vehicle, (jjj) one or more user command inputs, or (jv) one or more operational parameters of the vehicle are received as input to said calculating and analyzed by one or more processors;
 - (ii) calculating a probable speed;
 - (iii) determining an efficient speed based on said optimized speed and said probable speed; and
 - (iv) applying the calculated power corresponding to said determined efficient speed to the vehicle engine to travel said segment destination.

U.S. Patent No. 8,972,161

35. iQar is the owner of U.S. Patent No. 8,972,161 (the “’161 Patent”), entitled “Power Management Systems And Devices,” which was duly and legally issued by the United States Patent and Trademark Office (“USPTO”) on March 3, 2015. A copy of the ’161 Patent, is attached hereto as Exhibit 2.

36. The ’161 patent issued to inventors Martin Koebler, Nicole G. Goldstein, Stephen J. Brown, and Jason H. Harper from United States Patent Application No. 14/062,057, filed October 24, 2013, and was a continuation-in-part of application No. 13/066,189, filed on Apr. 8, 2011, now Pat. No. 8,712,650, which is a continuation-in-part of application No. 11/283,137, filed on Nov. 17, 2005, now Pat. No. 7,925,426.

37. The ’161 Patent relates generally to novel methods for managing the power consumption of an electric vehicle, such as the Accused Tesla Vehicles. *See* Ex. 2.

38. The ’161 Patent is directed to solving problems associated with the need for increased efficiency in vehicles. As the patent describes, there were significant shortcomings in the art the time of the invention. For instance, the management of energy efficiency in vehicles, was imprecise and rudimentary, which made it difficult or impossible to determine how the vehicles should travel.

39. As an example, a specific technological problem the ’161 Patent solves is how to reduce range anxiety and increase the efficiency of electric vehicles, while allowing drivers to continue to control the operation.

40. The ’161 Patent provides an innovative solution to this technological problem that involves receiving a route, segmenting the route, calculating energy values consumed by the vehicle to travel the route based on a plurality of target speeds, determining efficient speeds that achieve the best summation of energy values, and either notifying the vehicles’ operator about the efficient speeds or applying power corresponding to the efficient speeds. Notifying a vehicle’s operator about efficient speeds he or she can travel reduces range anxiety and increases the

operator's confidence in and enjoyment of an electric vehicle and applying power corresponding to the efficient speed can further increase vehicle efficiency and reduce the burden on the driver.

41. The '161 Patent contains two independent claims and 18 total claims. Each claim of the '161 patent is valid, enforceable, and patent eligible under Section 101 of the Patent Act. Additionally, the claims of the '161 patent recite elements and steps that were novel and not routine or conventional at the time of the invention, either individually or in their recited order and combination. Claim 1 reads:

1. A method of managing a power consumption of a vehicle, comprising the steps of:
 - (a) receiving a route at a computer of said vehicle;
 - (b) segmenting said route into a plurality of segment destinations;
 - (c) calculating a plurality of energy values consumed by said vehicle to travel said route based on a plurality of variations in a target speed of said vehicle between pairs of said segment destinations;
 - (d) determining a plurality of efficient speeds that achieve a best summation of said energy values; and
 - (e) notifying an operator of said vehicle about said efficient speeds to travel between each of said segment destinations.

U.S. Patent No. 10,829,002

42. iQar is the owner of U.S. Patent No. 10,829,002 (the "'002 Patent"), entitled "Vehicle Destination Prediction," which was duly and legally issued by the United States Patent and Trademark Office ("USPTO") on November 10, 2020. A copy of the '002 Patent, is attached hereto as Exhibit 3.

43. The '002 patent issued to inventors Martin Koebler, Nicole G. Goldstein, Stephen J. Brown, and Jason H. Harper from United States Patent Application No. 15/698,977, filed September 8, 2017, and was a continuation of application No. 15/626,676, filed on Jun. 19, 2017, which was a continuation of application No. 14/566,848, filed on Dec. 11, 2014, now Pat. No. 9,682,624, which is a continuation of application No. 14/206,138, filed on Mar. 12, 2014, now

Pat. No.8,972,162, which is a continuation of application No. 13/066,189, filed on Apr. 8, 2011, now Pat. No.8,712,650, which is a continuation-in-part of application No. 11/283,137, filed on Nov. 17, 2005, now Pat. No. 7,925,426.

44. The '002 Patent generally relates to predicting a destination of a driver in vehicles such as the Accused Tesla Vehicles. *See* Ex. 3.

45. One problem that leads to range anxiety is the concern of where and when to charge an electric vehicle. Potential purchasers were reluctant to purchase electric vehicles, such as the Accused Tesla Vehicles, for fear that they would run out of charge during their trip and be unable to locate a charging station.

46. The '002 Patent solved this technological problem. The inventors invented a power management device that would predict a destination, such as a charging location along a route. The inventors' technological solution involved collecting and analyzing sensor data and predicting a destination in response to a pattern, such as how efficiently a vehicle is typically driven, and historical data associated with the operation of the vehicle.

47. In this way, the inventors provided an innovative solution to the technological problem by developing an invention that could predict a charging station destination by determining whether and where charging would be required on a trip. This reduces range anxiety because drivers of the Accused Tesla Vehicles can be confident that they can complete their trip with sufficient remaining charge.

48. The '002 Patent contains three independent claims and 20 total claims. Each claim of the '002 patent is valid, enforceable, and patent eligible under Section 101 of the Patent Act. Additionally, the claims of the '002 patent recite elements and steps that were novel and not routine or conventional at the time of the invention, either individually or in their recited order and combination. Claim 1 reads:

1. A power management device comprising:

a sensor interface configured to receive sensor data samples during operation of a vehicle;

a memory configured to store said sensor data samples for different points in time along a route segment traveled by said vehicle; and

a processor configured to (i) analyze said sensor data samples stored in said memory to detect a pattern and (ii) predict a destination of a driver in response to (a) said pattern and (b) historical data associated with operation of said vehicle, wherein (i) at least one of said sensor data samples is driver-related and (ii) at least one of said sensor data samples comprises telemetry data; and

wherein the historical data comprises: data, regarding multiple route segments, gathered from the driver's operation of the vehicle on the multiple route segments during multiple trips; data, regarding multiple sequences of route segments, gathered from the driver's operation of the vehicle on the multiple sequences of route segments during the multiple trips; and data, regarding multiple travel destinations, gathered from the driver's operation of the vehicle to the multiple travel destinations during the multiple trips.

U.S. Patent No. 10,850,616

49. iQar is the owner of U.S. Patent No. 10,850,616 (the "'616 Patent"), entitled "Using Vehicle Systems To Generate A Route Database," which was duly and legally issued by the United States Patent and Trademark Office ("USPTO") on December 1, 2020. A copy of the '616 Patent, is attached hereto as Exhibit 4.

50. The '616 patent issued to inventors Martin Koebler, Nicole G. Goldstein, Stephen J. Brown, and Jason H. Harper from United States Patent Application No. 15/693,899, filed September 1, 2017 and was a continuation of application No. 15/626,676, filed on Jun. 19, 2017, which is a continuation of application No. 14/566,848, filed on Dec. 11, 2014, now Pat. No. 9,682,624, which is a continuation of application No. 14/206,138, filed on Mar. 12, 2014, now Pat. No. 8,972,162, which is a continuation of application No. 13/066,189, filed on Apr. 8, 2011,

now Pat. No.8,712,650, which is a continuation-in-part of application No. 11/283,137, filed on Nov. 17, 2005, now Pat. No. 7,925,426⁶. *See* Sept. 1, 2017 Corrected ADS Form as Exhibit 12.

51. The '616 Patent relates generally to novel apparatuses, vehicles and methods of creating a database of route conditions. *See* Ex. 4.

52. The '616 Patent is directed to solving problems associated with the need for better information about the condition of route segments a vehicle may travel. These conditions can impact fuel efficiency and allow for more efficient routing of a trip.

53. With the '616 Patent, the inventors recognized that the sensor data collected by individual vehicles could be aggregated in a remote database. This would provide a more comprehensive picture of the current conditions along multiple routes to be developed and shared with other vehicles that may travel that route segment in the future.

54. For example, the inventors recognized that each individual vehicle may have limited information available about the condition of future route segments, but very accurate information about the conditions of the segment the vehicle is currently travelling. The inventors realized that by combining in a remote database the information collected by multiple vehicles about each road segment, a more complete picture could be generated. This could be used in multiple ways that would reduce range anxiety. For example, sensor data from vehicles on a specific route segment could allow a determination of traffic conditions, which could be used for more efficient routing or prediction of the amount of energy required for other vehicles to travel that segment. This more accurate information can reduce range anxiety as drivers gain confidence in the projected energy use.

55. The '616 Patent contains three independent claims and 16 total claims. Each claim of the '616 patent is valid, enforceable, and patent eligible under Section 101 of the Patent Act.

⁶ iQar filed a Certificate of Correction on March 31, 2023, to correct a mistake by the United States Patent Office in which the Office did not print on the face of the patent the complete priority claim properly set forth in the September 1, 2017 Corrected ADS Form. This Patent Office mistake has no substantive effect on the '616 Patent because the correct priority is stated in the application's ADS as required by the applicable regulations.

Additionally, the claims of the '616 patent recite elements and steps that were novel and not routine or conventional at the time of the invention, either individually or in their recited order and combination. Claim 1 reads:

1. An apparatus comprising:

an interface configured to (a) receive (i) sensor data samples during operation of a vehicle and (ii) data from a telemetry system and (b) connect to a remote database;

a memory configured to store (a) said sensor data samples for different points in time along a route segment travelled by said vehicle and (b) said data from said telemetry system; and

a processor configured to (i) analyze said sensor data samples stored in said memory to determine current conditions and (ii) associate said current conditions with said route segment, wherein (a) said route segment is identified according to said data from said telemetry system and (b) said current conditions associated with said route segment are uploaded to said remote database to create historical route information for a plurality of route segments;

wherein the sensor data samples are received from at least one of an optical sensor, a position sensor, a speed sensor, a gyroscopic sensor, a revolutions-per-minute sensor, an accelerator pedal position sensor, a brake pedal position sensor, a battery state sensor, a tire pressure sensor, a proximity sensor, a weight sensor, an airflow sensor, and a gas flow sensor; and

wherein said current conditions comprise at least one of: drag, wind resistance, tire resistance, a location relative to a destination, traffic patterns, an amount of light energy, a position of the sun, geographical information, an elevation of said vehicle, a grade of a road, a location of stoplights, a timing

of stoplights, weather, a wind direction, a wind velocity, a temperature, air pressure, moisture, visibility, an amount of vibration, and traction.

U.S. Patent No. 10,882,399

56. iQar is the owner of U.S. Patent No. 10,882,399 (the “’399 Patent”), entitled “Electric Vehicle Power Management System,” which was duly and legally issued by the United States Patent and Trademark Office (“USPTO”) on January 5, 2021. A copy of the ’399 Patent, is attached hereto as Exhibit 5.

57. The ’399 patent issued to inventors Martin Koebler, Nicole G. Goldstein, Stephen J. Brown, and Jason H. Harper from United States Patent Application No. 16/433,703, filed June 6, 2019 and was a continuation of application No. 15/720,032, filed on Sep. 29, 2017, which is a continuation of application No. 15/626,676, filed on Jun. 19, 2017, which is a continuation of application No. 14/566,848, filed on Dec. 11, 2014, now Pat. No. 9,682,624, which is a continuation of application No. 14/206,138, filed on Mar. 12, 2014, now Pat. No. 8,972,162, which is a continuation of application No. 13/066,189, filed on Apr. 8, 2011, now Pat. No. 8,712,650, which is a continuation-in-part of application No. 11/283,137, filed on Nov. 17, 2005, now Pat. No. 7,925,426.

58. The ’399 Patent relates generally to a novel electric vehicle and methods of operation, such as and for, the Accused Tesla Vehicles. *See* Ex. 5.

59. The ’399 Patent is directed to solving technological problems associated with the need for increased efficiency in electric vehicles. As the patent describes, there were significant shortcomings in the art the time of the invention, namely that the management of energy efficiency in vehicles was imprecise and it was difficult or impossible to determine the manner vehicles should travel. For example, one specific problem the ’399 Patent solves involves the limited amount of information about a vehicle and the environment, and the ability for a human user to precisely control a vehicle based on the limited information. As such, a vehicle may travel inefficiently.

60. The '399 Patent solves these problems by determining information about, for example, the vehicle's external environment and operational status, as well as information from external command input telemetry in combination with user voice command inputs. The electric vehicle determines this information and applies a calculated power to cause the electric vehicle to travel along a route segment at a calculated speed.

61. The '399 Patent contains 2 independent claims and 20 total claims. Each claim of the '399 patent is valid, enforceable, and patent eligible under Section 101 of the Patent Act. Additionally, the claims of the '399 patent recite elements and steps that were novel and not routine or conventional at the time of the invention, either individually or in their recited order and combination. Claim 1 reads:

1. A method of electric vehicle operation, comprising:
 - determining a segment of a vehicle route;
 - determining information about an external environment of a vehicle, information about operational status of the vehicle, information from external command input telemetry in combination with user command inputs to the vehicle including voice command inputs; and
 - applying calculated electric power to the vehicle to travel along the segment of the vehicle route at a calculated speed.

COUNT I: INFRINGEMENT OF U.S. PATENT NO. 7,925,426

62. iQar re-alleges and incorporates by reference the allegations of the foregoing paragraphs as if fully set forth herein.

63. The '426 Patent is valid and enforceable under the United States patent laws.

64. iQar owns, by assignment, all right, title, and interest in and to the '426 Patent, including the right to sue and the right to collect for past damages.

65. Tesla has and continues to directly infringe one or more claims of the '426 Patent (either literally or under the doctrine of equivalents), in violation of 35 U.S.C. § 271(a), by making, using, offering for sale, and/or selling the Accused Tesla Vehicles within the United

States and/or importing the Accused Tesla Vehicles into the United States without authority or license. A claim chart demonstrating Tesla's infringement of the '426 Patent is attached hereto as Exhibit 6.

66. Pursuant to Fed. R. Civ. P. 11(b)(3), Tesla's infringement of the '426 Patent has been done with knowledge of the '426 Patent and with knowledge of iQar's contention that Tesla is infringing the '426 Patent. On January 28, 2021, the letter attached as Exhibit 11 was sent to Tesla and provided actual notice to Tesla of the '426 Patent. Tesla's infringement of the '426 Patent is thus willful and deliberate, entitling iQar to enhanced damages and attorneys' fees.

67. Additionally and/or alternatively, Tesla has and continues to indirectly infringe one or more claims of the '426 Patent, in violation of 35 U.S.C. § 271(b), by actively inducing users of the Accused Tesla Vehicles to directly infringe the one or more claims of the '426 Patent. Tesla had actual knowledge of the '426 Patent and Tesla's infringement thereof (or was willfully blind to it) at least as early as January 28, 2021. Tesla intentionally causes, urges, induces, or encourages users of the Accused Tesla Vehicles to directly infringe one or more claims of the '426 Patent. For example, Tesla encourages and induces its customers to use the Accused Tesla Vehicles in a manner that causes them to directly infringe the '426 Patent by providing directions, user manuals, and other communications that explain how the infringing functionalities work and operate.

68. Additionally and/or alternatively, Tesla has and continues to indirectly infringe one or more claims of the '426 Patent, in violation of 35 U.S.C. § 271(c), by offering to sell or selling within the United States or importing into the United States a component of a patented machine, manufacture, combination or composition, or a material or apparatus for use in practicing a patented process, constituting a material part of the invention, knowing the same to be especially made or especially adapted for use in an infringement of such patent, and not a staple article or commodity of commerce suitable for substantial noninfringing use, shall be liable as a contributory infringer. Tesla had actual knowledge of the '426 Patent and Tesla's infringement thereof (or was willfully blind to it) at least as early as January 28, 2021.

69. Tesla's infringement of the '426 Patent is exceptional and entitles iQar to attorneys' fees and costs incurred in prosecuting this action under 35 U.S.C. § 285.

70. iQar has been damaged by Tesla's infringement of the '426 Patent and will continue to be damaged unless Tesla is enjoined by this Court. iQar has suffered and continues to suffer irreparable injury for which there is no adequate remedy at law. The balance of hardships favors iQar, and public interest is not disserved by an injunction.

71. iQar is entitled to recover from Tesla all damages that iQar has sustained as a result of Tesla's infringement of the '426 Patent, including not less than a reasonable royalty for Tesla's use of the invention, together with interest and costs fixed by the Court.

COUNT II: INFRINGEMENT OF U.S. PATENT NO. 8,972,161

72. iQar re-alleges and incorporates by reference the allegations of the foregoing paragraphs as if fully set forth herein.

73. The '161 Patent is valid and enforceable under the United States patent laws.

74. iQar owns, by assignment, all right, title, and interest in and to the '161 Patent, including the right to sue and the right to collect for past damages.

75. Tesla has and continues to directly infringe one or more claims of the '161 Patent (either literally or under the doctrine of equivalents), in violation of 35 U.S.C. § 271(a), by making, using, offering for sale, and/or selling the Accused Tesla Vehicles within the United States and/or importing the Accused Tesla Vehicles into the United States without authority or license. A claim chart demonstrating Tesla's infringement of the '161 Patent is attached hereto as Exhibit 7.

76. Pursuant to Fed. R. Civ. P. 11(b)(3), Tesla's infringement of the '161 Patent has been done with knowledge of the '161 Patent and with knowledge of iQar's contention that Tesla is infringing the '161 Patent. On January 28, 2021, the letter attached as Exhibit 11 was sent to Tesla and provided actual notice to Tesla of the '161 Patent. Tesla's infringement of the '161 Patent is thus willful and deliberate, entitling iQar to enhanced damages and attorneys' fees.

77. Additionally and/or alternatively, Tesla has and continues to indirectly infringe one or more claims of the '161 Patent, in violation of 35 U.S.C. § 271(b), by actively inducing users of the Accused Tesla Vehicles to directly infringe the one or more claims of the '161 Patent. Tesla had actual knowledge of the '161 Patent and Tesla's infringement thereof (or was willfully blind to it) at least as early as January 28, 2021. Tesla intentionally causes, urges, induces, or encourages users of the Accused Tesla Vehicles to directly infringe one or more claims of the '161 Patent. For example, Tesla encourages and induces its customers to use the Accused Tesla Vehicles in a manner that causes them to directly infringe the '161 Patent by providing directions, user manuals, and other communications that explain how the infringing functionalities work and operate.

78. Additionally and/or alternatively, Tesla has and continues to indirectly infringe one or more claims of the '161 Patent, in violation of 35 U.S.C. § 271(c), by offering to sell or selling within the United States or importing into the United States a component of a patented machine, manufacture, combination or composition, or a material or apparatus for use in practicing a patented process, constituting a material part of the invention, knowing the same to be especially made or especially adapted for use in an infringement of such patent, and not a staple article or commodity of commerce suitable for substantial noninfringing use, shall be liable as a contributory infringer. Tesla had actual knowledge of the '161 Patent and Tesla's infringement thereof (or was willfully blind to it) at least as early as January 28, 2021.

79. Tesla's infringement of the '161 Patent is exceptional and entitles iQar to attorneys' fees and costs incurred in prosecuting this action under 35 U.S.C. § 285.

80. iQar has been damaged by Tesla's infringement of the '161 Patent and will continue to be damaged unless Tesla is enjoined by this Court. iQar has suffered and continues to suffer irreparable injury for which there is no adequate remedy at law. The balance of hardships favors iQar, and public interest is not disserved by an injunction.

81. iQar is entitled to recover from Tesla all damages that iQar has sustained as a result of Tesla's infringement of the '161 Patent, including not less than a reasonable royalty for Tesla's use of the invention, together with interest and costs fixed by the Court.

COUNT III: INFRINGEMENT OF U.S. PATENT NO. 10,829,002

82. iQar re-alleges and incorporates by reference the allegations of the foregoing paragraphs as if fully set forth herein.

83. The '002 Patent is valid and enforceable under the United States patent laws.

84. iQar owns, by assignment, all right, title, and interest in and to the '002 Patent, including the right to sue and the right to collect for past damages.

85. Tesla has and continues to directly infringe one or more claims of the '002 Patent (either literally or under the doctrine of equivalents), in violation of 35 U.S.C. § 271(a), by making, using, offering for sale, and/or selling the Accused Tesla Vehicles within the United States and/or importing the Accused Tesla Vehicles into the United States without authority or license. A claim chart demonstrating Tesla's infringement of the '002 Patent is attached hereto as Exhibit 8.

86. Pursuant to Fed. R. Civ. P. 11(b)(3), Tesla's infringement of the '002 Patent has been done with knowledge of the '002 Patent and with knowledge of iQar's contention that Tesla is infringing the '002 Patent. On January 28, 2021, the letter attached as Exhibit 11 was sent to Tesla and provided actual notice to Tesla of the '002 Patent. Tesla's infringement of the '002 Patent is thus willful and deliberate, entitling iQar to enhanced damages and attorneys' fees.

87. Additionally and/or alternatively, Tesla has and continues to indirectly infringe one or more claims of the '002 Patent, in violation of 35 U.S.C. § 271(b), by actively inducing users of the Accused Tesla Vehicles to directly infringe the one or more claims of the '002 Patent. Tesla had actual knowledge of the '002 Patent and Tesla's infringement thereof (or was willfully blind to it) at least as early as January 28, 2021. Tesla intentionally causes, urges, induces, or encourages users of the Accused Tesla Vehicles to directly infringe one or more claims of the '002 Patent. For example, Tesla encourages and induces its customers to use the Accused Tesla

Vehicles in a manner that causes them to directly infringe the '002 Patent by providing directions, user manuals, and other communications that explain how the infringing functionalities work and operate.

88. Additionally and/or alternatively, Tesla has and continues to indirectly infringe one or more claims of the '002 Patent, in violation of 35 U.S.C. § 271(c), by offering to sell or selling within the United States or importing into the United States a component of a patented machine, manufacture, combination or composition, or a material or apparatus for use in practicing a patented process, constituting a material part of the invention, knowing the same to be especially made or especially adapted for use in an infringement of such patent, and not a staple article or commodity of commerce suitable for substantial noninfringing use, shall be liable as a contributory infringer. Tesla had actual knowledge of the '002 Patent and Tesla's infringement thereof (or was willfully blind to it) at least as early as January 28, 2021.

89. Tesla's infringement of the '002 Patent is exceptional and entitles iQar to attorneys' fees and costs incurred in prosecuting this action under 35 U.S.C. § 285.

90. iQar has been damaged by Tesla's infringement of the '002 Patent and will continue to be damaged unless Tesla is enjoined by this Court. iQar has suffered and continues to suffer irreparable injury for which there is no adequate remedy at law. The balance of hardships favors iQar, and public interest is not disserved by an injunction.

91. iQar is entitled to recover from Tesla all damages that iQar has sustained as a result of Tesla's infringement of the '002 Patent, including not less than a reasonable royalty for Tesla's use of the invention, together with interest and costs fixed by the Court.

COUNT IV: INFRINGEMENT OF U.S. PATENT NO. 10,850,616

92. iQar re-alleges and incorporates by reference the allegations of the foregoing paragraphs as if fully set forth herein.

93. The '616 Patent is valid and enforceable under the United States patent laws.

94. iQar owns, by assignment, all right, title, and interest in and to the '616 Patent, including the right to sue and the right to collect for past damages.

95. Tesla has and continues to directly infringe one or more claims of the '616 Patent (either literally or under the doctrine of equivalents), in violation of 35 U.S.C. § 271(a), by making, using, offering for sale, and/or selling the Accused Tesla Vehicles within the United States and/or importing the Accused Tesla Vehicles into the United States without authority or license. A claim chart demonstrating Tesla's infringement of the '616 Patent is attached hereto as Exhibit 9.

96. Pursuant to Fed. R. Civ. P. 11(b)(3), Tesla's infringement of the '616 Patent has been done with knowledge of the '616 Patent and with knowledge of iQar's contention that Tesla is infringing the '616 Patent. On January 28, 2021, the letter attached as Exhibit 11 was sent to Tesla and provided actual notice to Tesla of the '616 Patent. Tesla's infringement of the '616 Patent is thus willful and deliberate, entitling iQar to enhanced damages and attorneys' fees.

97. Additionally and/or alternatively, Tesla has and continues to indirectly infringe one or more claims of the '616 Patent, in violation of 35 U.S.C. § 271(b), by actively inducing users of the Accused Tesla Vehicles to directly infringe the one or more claims of the '616 Patent. Tesla had actual knowledge of the '616 Patent and Tesla's infringement thereof (or was willfully blind to it) at least as early as January 28, 2021. Tesla intentionally causes, urges, induces, or encourages users of the Accused Tesla Vehicles to directly infringe one or more claims of the '616 Patent. For example, Tesla encourages and induces its customers to use the Accused Tesla Vehicles in a manner that causes them to directly infringe the '616 Patent by providing directions, user manuals, and other communications that explain how the infringing functionalities work and operate.

98. Additionally and/or alternatively, Tesla has and continues to indirectly infringe one or more claims of the '616 Patent, in violation of 35 U.S.C. § 271(c), by offering to sell or selling within the United States or importing into the United States a component of a patented machine, manufacture, combination or composition, or a material or apparatus for use in practicing a patented process, constituting a material part of the invention, knowing the same to be especially made or especially adapted for use in an infringement of such patent, and not a staple

article or commodity of commerce suitable for substantial noninfringing use, shall be liable as a contributory infringer. Tesla had actual knowledge of the '616 Patent and Tesla's infringement thereof (or was willfully blind to it) at least as early as January 28, 2021.

99. Tesla's infringement of the '616 Patent is exceptional and entitles iQar to attorneys' fees and costs incurred in prosecuting this action under 35 U.S.C. § 285.

100. iQar has been damaged by Tesla's infringement of the '616 Patent and will continue to be damaged unless Tesla is enjoined by this Court. iQar has suffered and continues to suffer irreparable injury for which there is no adequate remedy at law. The balance of hardships favors iQar, and public interest is not disserved by an injunction.

101. iQar is entitled to recover from Tesla all damages that iQar has sustained as a result of Tesla's infringement of the '616 Patent, including not less than a reasonable royalty for Tesla's use of the invention, together with interest and costs fixed by the Court.

COUNT V: INFRINGEMENT OF U.S. PATENT NO. 10,882,399

102. iQar re-alleges and incorporates by reference the allegations of the foregoing paragraphs as if fully set forth herein.

103. The '399 Patent is valid and enforceable under the United States patent laws.

104. iQar owns, by assignment, all right, title, and interest in and to the '399 Patent, including the right to sue and the right to collect for past damages.

105. Tesla has and continues to directly infringe one or more claims of the '399 Patent (either literally or under the doctrine of equivalents), in violation of 35 U.S.C. § 271(a), by making, using, offering for sale, and/or selling the Accused Tesla Vehicles within the United States and/or importing the Accused Tesla Vehicles into the United States without authority or license. A claim chart demonstrating Tesla's infringement of the '399 Patent is attached hereto as Exhibit 10.

106. Pursuant to Fed. R. Civ. P. 11(b)(3), Tesla's infringement of the '399 Patent has been done with knowledge of the '399 Patent and with knowledge of iQar's contention that Tesla is infringing the '399 Patent. On January 28, 2021, the letter attached as Exhibit 11 was sent to

Tesla and provided actual notice to Tesla of the '399 Patent. Tesla's infringement of the '399 Patent is thus willful and deliberate, entitling iQar to enhanced damages and attorneys' fees.

107. Additionally and/or alternatively, Tesla has and continues to indirectly infringe one or more claims of the '399 Patent, in violation of 35 U.S.C. § 271(b), by actively inducing users of the Accused Tesla Vehicles to directly infringe the one or more claims of the '399 Patent. Tesla had actual knowledge of the '399 Patent and Tesla's infringement thereof (or was willfully blind to it) at least as early as January 28, 2021. Tesla intentionally causes, urges, induces, or encourages users of the Accused Tesla Vehicles to directly infringe one or more claims of the '399 Patent. For example, Tesla encourages and induces its customers to use the Accused Tesla Vehicles in a manner that causes them to directly infringe the '399 Patent by providing directions, user manuals, and other communications that explain how the infringing functionalities work and operate.

108. Additionally and/or alternatively, Tesla has and continues to indirectly infringe one or more claims of the '399 Patent, in violation of 35 U.S.C. § 271(c), by offering to sell or selling within the United States or importing into the United States a component of a patented machine, manufacture, combination or composition, or a material or apparatus for use in practicing a patented process, constituting a material part of the invention, knowing the same to be especially made or especially adapted for use in an infringement of such patent, and not a staple article or commodity of commerce suitable for substantial noninfringing use, shall be liable as a contributory infringer. Tesla had actual knowledge of the '399 Patent and Tesla's infringement thereof (or was willfully blind to it) at least as early as January 28, 2021.

109. Tesla's infringement of the '399 Patent is exceptional and entitles iQar to attorneys' fees and costs incurred in prosecuting this action under 35 U.S.C. § 285.

110. iQar has been damaged by Tesla's infringement of the '399 Patent and will continue to be damaged unless Tesla is enjoined by this Court. iQar has suffered and continues to suffer irreparable injury for which there is no adequate remedy at law. The balance of hardships favors iQar, and public interest is not disserved by an injunction.

111. iQar is entitled to recover from Tesla all damages that iQar has sustained as a result of Tesla's infringement of the '399 Patent, including not less than a reasonable royalty for Tesla's use of the invention, together with interest and costs fixed by the Court.

PRAYER FOR RELIEF

WHEREFORE, iQar respectfully requests:

- A. That Judgment be entered that Tesla has infringed at least one or more claims of the Patents-In-Suit, directly and/or indirectly, literally and/or under the doctrine of equivalents, and that such infringement is willful;
- B. An injunction enjoining Tesla, its officers, agents, servants, employees and attorneys, and other persons in active concert or participation with Tesla, and its parents, subsidiaries, divisions, successors and assigns, from further infringement of the Patents-In-Suit.
- C. An award of damages sufficient to compensate iQar for Tesla's infringement under 35 U.S.C. § 284, including an enhancement of damages on account of Tesla's willful infringement;
- D. That the case be found exceptional under 35 U.S.C. § 285 and that iQar be awarded its reasonable attorneys' fees;
- E. Costs and expenses in this action;
- F. An award of prejudgment and post-judgment interest; and
- G. Such other and further relief as the Court may deem just and proper.

DEMAND FOR JURY TRIAL

Pursuant to Rule 38(b) of the Federal Rules of Civil Procedure, iQar respectfully demands a trial by jury on all issues triable by jury.

Dated: June 20, 2023

Respectfully submitted,

By: /s/Mark D. Siegmund

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Attorneys for Plaintiff iQar Inc.

CERTIFICATE OF SERVICE

A true and correct copy of the foregoing instrument was served or delivered electronically via the U.S. District Court ECF filing system to all counsel of record on this 20th day of June, 2023.

/s/ Mark D. Siegmund
Mark D. Siegmund