CLAIMS

1. A data transfer and charging station for a vehicle, comprising:

a frame with a roof;

a pedestal positioned under the roof;

a charger to transfer electricity from an electrical supply to the vehicle;

a data transfer system to connect the vehicle to a network, wherein the charger and the data transfer system are associated with the pedestal; and

an intelligent data routing system configured to automatically route data moving from and/or to the vehicle at least based on a preferred end-point, wherein:

data routing priority is capable of being provided to vehicles having a higher priority, and

the automatic routing of the data for the preferred end-point is determined at least based on a type of data, information about the vehicle and information about the charging station.

2. A data transfer and charging station for a vehicle, comprising:

a frame with a roof;

a pedestal positioned under the roof;

a charger for transferring electricity from an electrical supply to the vehicle;

a data transfer system to connect the vehicle to a network, wherein the pedestal includes the charger and the data transfer system; and

an intelligent data routing system configured such that data moving from or to the vehicle is automatically routed based on a preferred end-point, wherein the intelligent data routing system is configured to provide for a specific vehicle priority routing to the end-point such that data transfer to/from the specific vehicle is prioritized over other vehicles, and wherein the intelligent data routing system is configured to use at least information about the vehicle, charging station and type of data to determine routing.

3. The data transfer and charging station of claims 1 or 2, wherein the data transfer system includes a fiber optic cable with an optical connector to connect to a data port of the vehicle.

4. The data transfer and charging station of claim 3, wherein the fiber optic cable is retained by a reel positioned within a compartment of the pedestal.

5. The data transfer and charging station of claims 3 or 4, wherein the optical connector is associated with a plug of the charger.

6. The data transfer and charging station of claim 5, wherein the plug of the charger includes the optical connector.

7. The data transfer and charging station of any one of claims 3 to 6, wherein the data transfer system further comprises:

an uninterruptible power supply;

a network interface device to connect the data transfer system to the network; and

a fiber distribution panel to connect the network interface device to the optical connector.

8. The data transfer and charging station of any one of claims 1 to 7, wherein the charger includes a cable extending from the pedestal, the cable including a plug to connect to a receptacle of the vehicle.

9. The data transfer and charging station of claim 8, wherein the cable includes a fiber optic cable associated with the data transfer system, wherein the plug includes an optical connector to connect the vehicle to the network.

10. The data transfer and charging station of claim 9, wherein the plug is positioned on an arm to automatically connect the plug to the vehicle receptacle based on information from one or more sensors.

11. The data transfer and charging station of any one of claims 8 to 10, wherein the plug is positioned on an arm to automatically connect the plug to the vehicle receptacle, wherein the data transfer and charging station includes the one or more sensors operable to sense the position of the receptacle relative to the pedestal and a control system configured to

receive data from the sensor and, using the sensor data, to generate signals that cause an actuator of the arm to move and connect the plug to the receptacle.

12. The data transfer and charging station of any one of the preceding claims, wherein the roof includes a landing pad for an unmanned aerial vehicle.

13. The data transfer and charging station of claim 12, wherein the landing pad can transfer electricity from the electrical supply to the unmanned aerial vehicle.

14. The data transfer and charging station of any of claims 12 or 13, wherein the landing pad can connect the unmanned aerial vehicle to the network and transfer data to and from the unmanned aerial vehicle.

15. The data transfer and charging station of any one of the preceding claims, wherein the roof includes a solar panel to convert sunlight into DC power, the solar panel connected to the charger and the electrical supply.

16. The data transfer and charging station of any one of the preceding claims, wherein electricity for the electrical supply and optical fiber to connect the vehicle to the network are provided within a single cable or in two different cables.

17. The data transfer and charging station of any one of the preceding claims, further comprising one or more of a media converter, a network switch, a router, a modem, an access point, a transceiver, a Wi-Fi router and a wireless router.

18. The data transfer and charging station of any one of the preceding claims, wherein the automatic routing is enabled utilizing an electronic signal, header information, identifier information, license plate information, Vehicle Identification Number (VIN) information, a physical identifier associated with the vehicle, a user, manufacturer information, owner information, manager information, and/or charging station information.

19. The data transfer and charging station of any one of the preceding claims, wherein the automatic routing is to a cloud-based endpoint and the data is prioritized over other vehicles' data.

20. The data transfer and charging station any one of the preceding claims, wherein the automatic routing is based on a tier of service.

21. The data transfer and charging station of any one of the preceding claims, wherein the automatic routing is based on a matrix-based determination of factors.

22. A method of connecting a vehicle to a network and transferring electricity to the vehicle, comprising:

positioning the vehicle proximate to a pedestal of a data transfer and charging station;

connecting a plug of a charger to a receptacle of the vehicle, the charger connected to a source of electricity;

connecting an optical connector of a data transfer system to a data port of the vehicle, the data transfer system connected to the network, wherein the charger and the data transfer system are associated with the pedestal; and

automatically routing data from and/or to the vehicle at least based on a preferred end-point, wherein:

data routing priority is capable of being provided to vehicles having a higher priority, and

the automatic routing of the data for the preferred end-point is determined at least based on a type of data, information about the vehicle and information about the charging station.

23. A method of connecting a vehicle to a network and transferring electricity to the vehicle, comprising:

positioning the vehicle proximate to a pedestal of a data transfer and charging station;

connecting a plug of a charger to a receptacle of the vehicle, the charger connected to a source of electricity;

connecting an optical connector of a data transfer system to a data port of the vehicle, the data transfer system connected to the network, wherein the pedestal includes the charger and the data transfer system:

automatically routing data moving from or to the vehicle by means of an intelligent data routing system based on a preferred end-point, wherein for a specific vehicle priority routing to the end-point is provided such that data transfer to/from the specific vehicle is prioritized over other vehicles, and wherein at least information about the vehicle, charging station and type of data are used to determine routing.

24. The method of claim 22 or 23, wherein the optical connector is associated with a fiber optic cable retained by a reel positioned in the pedestal.

25. The method of claims 22 to 24, wherein the plug of the charger includes the optical connector.

26. The method of claim 22 or 23, wherein connecting the plug of the charger to the receptacle of the vehicle further includes:

determining a position of the receptacle of the vehicle;

moving an arm of the data transfer and charging station proximate to the vehicle, wherein the arm includes the plug of the charger; and

automatically connecting the plug to the receptacle.

27. The method of any of claims 22 to 26, further comprising:

transferring a delivery route to the vehicle.

28. An integrated data transfer and charging station for a vehicle, comprising:

a pedestal positioned within a structure;

a charger for transferring electricity from an electrical supply to a vehicle;

an optical data transfer system to connect the vehicle to a network, wherein the charger and the optical data transfer system are associated with the pedestal; and

an intelligent data routing system configured to automatically route data from and/or to the vehicle via the optical data transfer system at least based on a preferred end-point, wherein:

data routing priority is capable of being provided to vehicles having a higher priority, and

the automatic routing of the data for the preferred end-point is determined at least based on a type of data, information about the vehicle and information about the charging station.

29. An integrated data transfer and charging station for a vehicle, comprising:

a pedestal positioned within a structure;

a charger for transferring electricity from an electrical supply to a vehicle;

an optical data transfer system to connect the vehicle to a network, wherein the charger and the optical data transfer system are associated with the pedestal; and

an intelligent data routing system configured such that data moving from or to the vehicle is automatically routed based on a preferred end-point, wherein the intelligent data routing system is configured to provide for a specific vehicle priority routing to the end-point such that data transfer to/from the specific vehicle is prioritized over other vehicles, and wherein the intelligent data routing system is configured to use at least information about the vehicle, charging station and type of data to determine routing.

30. The integrated data transfer and charging station of claim 28 or 29, wherein electricity from the electrical supply for the vehicle and optical fiber to connect the vehicle to the network are provided within a single cable or in two different cables.

31. The integrated data transfer and charging station of any of claims 28 to 30, further comprising one or more of a media converter, a network switch, a router, a modem, an access point, a transceiver, a Wi-Fi router and a wireless router.