Claims

1. A charging station, comprising:

a plurality of light sources;

one or more processors; and

memory storing instructions for performing a set of operations, including:

determining a status of the charging station, the status of the charging station including one or more states;

in accordance with a determination that the status includes a first state, providing a first ~~visual indication~~ lighted animation of the first state using a first light source of the plurality of light sources, the first ~~visual indication~~ lighted animation including a programmed first sequence of lights displayed using the first light source;

while providing the first ~~visual indication~~ lighted animation of the first state using the first light source~~,~~:

determining that the status of the charging station includes a second state concurrently with the first state; and

in accordance with a determination that the status of the charging station includes the second state, providing a second ~~visual indication~~ lighted animation of the second state, the second ~~visual indication~~ lighted animation including a programmed second sequence of lights, distinct from the first sequence of lights, displayed using a second light source of the plurality of light sources.

2. The charging station of claim 1, wherein the first state is a state selected from the group consisting of a state indicating that the charging station is not currently occupied and is capable of providing service, a state indicating that the charging station is currently occupied, a state indicating that the charging station is out of service.

3. The charging station of claim 2, wherein the second state comprises a state indicating that a user is approaching the charging station.

4. The charging station of claim 1, wherein:

the charging station includes a holder of a charge gun and the charge gun,

the first state is a state indicating that the charging station is currently occupied; and

the second state is a state selected from the group consisting of: a state indicating that ~~a~~ the charge gun has been removed from ~~a~~ the holder of the charging station but not

connected to ~~the~~ an electric vehicle, a state indicating that the charge gun has been removed from the holder and is connected to ~~the~~ an electric vehicle without delivering a charge, a state indicating that the charge gun is connected to ~~the~~ an electric vehicle and is delivering a charge, a state indicating that the charge gun is connected to ~~the~~ an electric vehicle and has completed charging, a state indicating that the charge gun has been removed from ~~the~~ an electric vehicle but has not been placed into the holder, and a state indicating that the charge gun has been returned to the holder.

5. The charging station of claim 1, wherein:

the charging station includes one or more optical sensors, and

the instructions further comprise instructions for determining the status of the charging station using the one or more optical sensors.

6. The charging station of claim 1, wherein the first ~~visual indication~~ lighted animation is an animated sequence of illumination of a subset of the plurality of light sources, the subset including the first light source.

7. The charging station of claim 1, wherein the first ~~visual indication~~ lighted animation comprises an animated sequence of changing colors of a subset of the plurality of light sources, the subset including the first light source.

8. The charging station of claim 1, wherein:

the charging station includes a holder of a charge gun and the charge gun, and

the plurality of light sources includes one or more of a vertical strip light source, a horizontal strip light source, a light source surrounding ~~a~~ the holder of ~~a~~ the charge gun, and a light source positioned to illuminate a user area near the charging station.

9. The charging station of claim 8, wherein the light source positioned to illuminate the user area is activated in accordance with a determination that a user is approaching.

10. The charging station of claim 9, wherein:

the charging station includes one or more optical sensors, and

determining that the user is approaching comprises using the one or more optical sensors.

11. The charging station of claim 1, wherein at least one of the first ~~visual indication~~ lighted animation and the second ~~visual indication~~ lighted animation comprises a lighted animation that includes simulated movement of lights.

12. The charging station of claim 1, wherein the plurality of light sources is a connected strip of LEDs.

13. The charging station of claim 1, wherein:

the charging station includes a holder of a charge gun and the charge gun, and

the first light source comprises a vertical strip light source next to a display of the charging station, and the second light source comprises a light source surrounding ~~a~~ the holder of ~~a~~ the charge gun.

14. The charging station of claim 1, wherein the first light source comprises a vertical strip light source next to a display of the charging station, and the second light source comprises a horizontal strip light source above the display of the charging station.

15. The charging station of claim 1, wherein the first light source comprises a vertical strip light source next to a display of the charging station, and the second light source comprises a light source positioned to illuminate a user area near the charging station.

16. The charging station of claim 1, wherein:

the charging station includes a holder of a charge gun and the charge gun, and

the first state indicates that ~~a~~ the charge gun is connected to ~~the~~ an electric vehicle and is delivering a charge and the second state indicates that the charge gun is connected to ~~the~~ an electric vehicle and has completed charging.

17. The charging station of claim 1, wherein:

the charging station includes a holder of a charge gun and the charge gun, and

the first state indicates that ~~a~~ the charge gun has been removed from ~~the~~ an electric vehicle but has not been placed into ~~a~~ the holder and the second state indicates that the charge gun has been returned to the holder.

18. A method indicating a state of an electric vehicle charging station, comprising:

at a charging station for an electric vehicle, the charging station including a plurality of light sources, one or more processors and memory:

determining a status of the charging station, the status of the charging station including one or more states;

in accordance with a determination that the status includes a first state, providing a first ~~visual indication~~ lighted animation of the first state using a first light source of the plurality of light sources, the first ~~visual indication~~ lighted animation including a programmed first sequence of lights displayed using the first light source;

while providing the first ~~visual indication~~ lighted animation of the first state using the first light source~~,~~:

determining that the status of the charging station includes a second state concurrently with the first state; and

in accordance with a determination that the status of the charging station includes the second state, providing a second ~~visual indication~~ lighted animation of the second state, the second ~~visual indication~~ lighted animation including a programmed second sequence of lights, distinct from the first sequence of lights, displayed using a second light source of the plurality of light sources.

19. The method of claim 18, wherein the first state is a state selected from the group consisting of: a state indicating that the charging station is not currently occupied by an electric vehicle and is capable of providing service, a state indicating that the charging station is currently occupied by an electric vehicle, a state indicating that the charging station is out of service.

20. The method of claim 19, wherein the second state comprises a state indicating that a user is approaching the charging station.

21. The method of claim 18, wherein:

the charging station includes a holder of a charge gun and the charge gun, and

the first state is a state indicating that the charging station is currently occupied by an electric vehicle; and

the second state is a state selected from the group consisting of: a state indicating that ~~a~~ the charge gun has been removed from ~~a~~ the holder of the charging station but not connected to the electric vehicle, a state indicating that the charge gun has been removed from the holder and is connected to the electric vehicle without delivering a charge, a state indicating that the charge gun is connected to the electric vehicle and is delivering a charge, a state indicating that the charge gun is connected to the electric vehicle and has completed

charging, a state indicating that the charge gun has been removed from the electric vehicle but has not been placed into the holder, and a state indicating that the charge gun has been returned to the holder.

22. The method of claim 18, wherein:

the charging station includes one or more optical sensors, and

the method further comprises determining the status of the charging station using the one or more optical sensors.

23. The method of claim 18, wherein the first ~~visual indication~~ lighted animation is an animated sequence of illumination of a subset of the plurality of light sources, the subset including the first light source.

24. The method of claim 18, wherein the first ~~visual indication~~ lighted animation comprises an animated sequence of changing colors of a subset of the plurality of light sources, the subset including the first light source.

25. The method of claim 18, wherein:

the charging station includes a holder of a charge gun and the charge gun, and

the plurality of light sources includes one or more of a vertical strip light source, a horizontal strip light source, a light source surrounding ~~a~~ the holder of ~~a~~ the charge gun, and a light source positioned to illuminate a user area near the charging station.

26. The method of claim 25, wherein the light source positioned to illuminate the user area is activated in accordance with a determination that a user is approaching.

27. The method of claim 26, wherein:

the charging station includes one or more optical sensors, and

determining that the user is approaching comprises using the one or more optical sensors.

28. The method of claim 18, wherein at least one of the first ~~visual indication~~ lighted animation and the second ~~visual indication~~ lighted animation comprises a lighted animation that includes simulated movement of lights.

29. The method of claim 18, wherein the plurality of light sources is a connected strip of LEDs.

30. The method of claim 18, wherein:

the charging station includes a holder of a charge gun and the charge gun, and

the first light source comprises a vertical strip light source next to a display of the charging station, and the second light source comprises a light source surrounding ~~a~~ the holder of ~~a~~ the charge gun.

31. The method of claim 18, wherein the first light source comprises a vertical strip light source next to a display of the charging station, and the second light source comprises a horizontal strip light source above the display of the charging station.

32. The method of claim 18, wherein:

the charging station includes a holder of a charge gun and the charge gun, and

the first state indicates that ~~a~~ the charge gun has been removed from ~~a~~ the holder of the charging station but not connected to an electric vehicle, and the second state indicates the charge gun is connected to an electric vehicle and is delivering a charge.

33. The method of claim 18, wherein:

the charging station includes a holder of a charge gun and the charge gun, and

the first state indicates that ~~a~~ the charge gun is connected to an electric vehicle and is delivering a charge and the second state indicates that the charge gun is connected to an electric vehicle and has completed charging.

34. The method of claim 18, wherein:

the charging station includes a holder of a charge gun and the charge gun, and

the first state indicates that ~~a~~ the charge gun has been removed from an electric vehicle but has not been placed into ~~a~~ the holder and the second state indicates that the charge gun has been returned to the holder.

35. A charging station for an electric vehicle, comprising:

a plurality of light sources;

means for determining a status of the charging station, the status of the charging station including one or more states;

means, enabled in accordance with a determination that the status includes a first state, for providing a first ~~visual indication~~ lighted animation of the first state using a first light source of the plurality of light sources, the first ~~visual indication~~ lighted animation including a programmed first sequence of lights displayed using the first light source;

means, enabled while providing the first ~~visual indication~~ lighted animation of the first state using the first light source, for:

determining that the status of the charging station includes a second state concurrently with the first state; and

~~means, enabled~~ in accordance with a determination that the status of the charging station includes the second state, ~~for~~ providing a second ~~visual indication~~ lighted animation of the second state, the second ~~visual indication~~ lighted animation including a programmed second sequence of lights, distinct from the first sequence of lights, displayed using a second light source of the plurality of light sources.

36. A charging station for an electric vehicle, comprising:

a plurality of light sources;

means for performing the method of any of claims 19-34.