CLAIMS

We claim:

1. A **receiver device** for facilitating wireless power reception, the receiver device comprising:

a receiver transceiver configured for wirelessly communicating with at least one transmitter device, wherein the receiver transceiver is configured for:

receiving at least one transmitter characteristic data from the at least one transmitter device;

transmitting at least one receiver characteristic data to the at least one transmitter device, wherein the at least one transmitter device is configured for controlling transmission of wireless power based on the at least one receiver characteristic data; and

receiving wireless power transmission from the at least one transmitter device;

converting the wireless power transmission into electrical energy;

a receiver processing device communicatively coupled to the receiver transceiver, wherein the receiver processing device is configured for:

analyzing the at least one transmitter characteristic data; and

determining capability of the at least one transmitter device for transmitting wireless power receivable by the receiver device based on the analyzing;

a receiver storage device configured for storing the at least one receiver characteristic data; and

a power output port communicatively coupled with the receiver transceiver, wherein the power output port is configured to be interfaced with at least one power input port of at least one electronic device, wherein the power output port is configured for supplying the electrical energy to the at least one electronic device.

2. The receiver device of claim 1, wherein the receiver characteristic data comprises receiver authentication data, wherein the at least one transmitter device is

configured for authenticating the receiver device for wireless power transfer based on the receiver authentication data.

3. The receiver device of claim 1, wherein the at least one transmitter characteristic comprises transmitter authentication data, wherein the receiver processing device is configured for authenticating the at least one transmitter device based on the transmitter authenticating data, wherein the receiving of the wireless power from the at least one transmitter device is based on the authenticating of the at least one transmitter device.

4. The receiver device of claim 1 further comprising **a microphone** communicatively coupled to the receiver processing device, wherein the microphone is configured for detecting a voice command, wherein the receiver processing device is further configured for:

analyzing the voice command; and

initiating the wireless communicating of the receiver device with the at least one transmitter device based on the analyzing of the voice command.

5. The receiver device of claim 1, wherein the wireless power transmission comprises terahertz radiation.

6. The receiver device of claim 1, wherein the receiver transceiver is further configured for:

pairing with at least one transmitter transceiver comprised in the at least one transmitter device based on at least one of the at least one transmitter characteristic data and the at least one receiver characteristic data; and

establishing a wireless power transfer connection based on the pairing, wherein the wireless power transmission from the at least one transmitter device is based on the wireless power transfer connection.

7. The receiver device of claim 1, wherein the at least one receiver characteristic data comprises a receiver device type of the receiver device, at least one distance between the receiver device and the at least one transmitter device and an amount of power requested by the receiver device, wherein the at least one transmitter device is configured for controlling the wireless power transmission based on at least one of the at least one distance and the receiver device type.

8. The receiver device of claim 7, wherein the at least one transmitter characteristic data comprises a transmitter device type of the at least one transmitter device, a transmission power level associated with the at least one transmitter device, wherein the receiver processing device is further configured for determining the at least one distance based on analyzing each of the transmitter device type of the at least one transmitter device, the transmission power level and at least one received power level corresponding to the wireless power transmission received from the at least one transmitter device.

9. The receiver device of claim 1, wherein the at least one receiver characteristic data comprises a receiver device type, wherein the at least one transmitter device is configured for determining the at least one distance based on a measurement of loading created on at least one antenna corresponding to the at least one transmitter device due to the receiving of the wireless power transmission by the receiver device from the at least one transmitter device.

10. The receiver device of claim 1, wherein the receiver transceiver comprises a first receiver transceiver configured for communicating over a first frequency band and a second receiver transceiver configured for communicating over a second frequency band, wherein the first receiver transceiver is configured for receiving at least one transmitter characteristic data and transmitting the at least one receiver characteristic data, wherein the second receiver transceiver is configured for receiving the wireless power transmission from the at least one transmitter device, wherein the first frequency band is characterized by frequencies lower

than terahertz frequencies, wherein the second frequency band is characterized by terahertz frequencies.

11. The receiver device of claim 1, wherein the receiver transceiver is further configured for transmitting wireless power transmission to the at least one transmitter device, wherein the receiver processing device is further configured for:

analyzing the at least one transmitter characteristic data; and

determining capability of the at least one transmitter device for receiving wireless power transmittable by the receiver device based on the analyzing of the at least one transmitter characteristic data.

12. The receiver device of claim 1 further comprising **at least one sensor** configured for sensing at least one variable associated with wireless power transfer between the at least one transmitter device and the receiver device, wherein the receiver processing device is further configured for:

analyzing the at least one variable; and

generating a notification based on the analyzing of the at least one variable, wherein the receiver transceiver is further configured for transmitting the notification to a user device associated with the receiver device.

13. The receiver device of claim 12, wherein the receiver processing device is further configured for determining an abnormal state of wireless power transfer based on the analyzing of the at least one variable, wherein the receiver device further comprises an input device configured for receiving an input from a user of the receiver device, wherein the wireless power reception is based on the input.

14. The receiver device of claim 1, wherein the receiver transceiver is further configured for:

transmitting a registration request to the at least one transmitter device, wherein the registration request comprises a unique receiver device

identifier, wherein the at least one transmitter device is configured for accessing a distributed block-chain associated with wireless power transfer, wherein the at least one transmitter device is further configured for:

analyzing the registration request; and

updating the distributed block-chain based on the analyzing of the registration request; and

transmitting a registration response to the receiver device, wherein the receiver transceiver is configured for receiving the registration response.

15. The receiver device of claim 14, wherein the receiver device is associated with a domain, wherein the at least one transmitter device is further configured for comparing the registration request with the distributed block-chain associated with the domain, wherein the transmitting of the registration response is based on the comparing.

16. The receiver device of claim 14, wherein the at least one receiver characteristic data comprises a wireless power transfer request comprising the unique receiver device identifier, wherein the at least one transmitter device is configured for:

accessing the distributed block-chain based on the wireless power transfer request;

authenticating the receiver device based on a result of the accessing; and

granting the wireless power transfer request based on the authenticating, wherein the wireless power transmission is based on the granting.

17. The receiver device of claim 15, wherein the distributed block-chain comprises a trust level associated with the receiver device, wherein the authenticating of the receiver device is based on the trust level.

18. The receiver device of claim 14 further comprising at least one sensor configured for sensing at least one variable associated with wireless power transfer between the at least one transmitter device and the receiver device, wherein the receiver is further configured for storing the at least one variable in the distributed block-chain, wherein the at least one transmitter device is further configured for:

retrieving the at least one variable from the distributed block-chain

analyzing the at least one variable; and

determining a behavior of the receiver device based on the analyzing of the at least one variable.

19. The receiver device of claim 18, wherein the at least one transmitter device is further configured for:

generating a trust level associated with the receiver device based on the behavior; and

updating the distributed block-chain with the trust level associated with the receiver device.

20. The receiver device of claim 18, wherein the at least one sensor comprises a receiver location sensor configured to determine a geographical location of the receiver device, wherein, the registration request comprises the geographical location, wherein the at least one transmitter device is further configured for updating the distributed block-chain with the geographical location of the receiver device.