CLAIMS

What is claimed is:

1. An apparatus comprising:

an adjustable power supply source to generate an adjustable power supply;

a node to provide the adjustable power supply to a device; and

a bus which is operable to:

send a first message to the device, the first message is to indicate that the adjustable power supply source is capable of dynamically providing an adjustable power supply;

receive a request from the device, the request is to indicate a new voltage or current specification; and

send a second request to the adjustable power supply source when it is determined that a power transmitter is to adjust its wireless power transmission, wherein the adjustment determination is made based on real-time power consumption needs of the system under different software demand scenarios, including at least one of: “idle,” “web browsing,” and “video playback”.

2. The apparatus of claim 1, wherein the bus is operable to:

send a second message to the device, the second message is to indicate that the requested new voltage or current specification was accepted or rejected.

3. The apparatus of claim 2, wherein the bus is operable to:

send a third message to the device, the third message is to indicate that the requested new voltage or current specification is now activated and ready.

4. The apparatus of claim 1, wherein the request is defined in a reserve bit of a Data Protocol Message Type of a Universal Serial Bus (USB) Power Delivery Specification.

5. The apparatus of claim 1, wherein the first message is based on a reserved bit setting in a list of Types of Power Sources of a Universal Serial Bus (USB) Power Delivery Specification.

6. The apparatus of claim 1, wherein the adjustable power supply source is operable to generate one of:

a fixed power supply;

a power supply for charging a battery; or

a variable power supply.

7. The apparatus of claim 1, wherein the adjustable power supply source is a Universal Serial Bus (USB) Power Delivery compliant power source.

8. The apparatus of claim 1, wherein the node and bus are Universal Serial Bus (USB) Power Delivery compliant.

9. The apparatus of claim 1, wherein the node and bus are either part of a USB Type-C cable or coupled with a USB Type-C cable.

10. The apparatus of claim 1, wherein the device is a wireless charging mat.

11. A system comprising:

a memory;

a processor coupled to the memory, the processor including an apparatus which is to:

dynamically send a first request to an adjustable power source to adjust a power supply for the processor, the adjustable power source being external to the system;

send a second request to the adjustable power source when it is determined that a power transmitter unit (PTU) is to adjust its wireless power transmission, wherein the adjustment determination is made based on real-time power consumption needs of the system under different software demand scenarios, including at least one of: “idle,” “web browsing,” and “video playback”; and

receive a power ready signal from the adjustable power source when the adjustable power source is to provide the adjusted power supply to the processor; and

a wireless interface which is to allow the processor to communicate with another device.

12. The system of claim 11 comprises a power transmitter unit (PTU) to transmit power to another device.

13. The system of claim 12, wherein the other device has a power receiver unit (PRU).

14. The system of claim 13, wherein the processor is operable to send a second request to the adjustable power source when it is determined that the PTU is to adjust its wireless power transmission.

15. The system of claim 14, wherein the adjustment determination is made based on wireless power delivery efficiency resulting from the relative spatial alignment of the PTU and the PRU.

16. The system of claim 14, wherein the adjustment determination is made based on an optimal battery charging efficiency of the system.

17. Machine readable storage media having machine readable instructions that when executed cause a machine to perform an operation which comprises:

send a first message to a device over a bus, the first message is to indicate an adjustable power source nature of an apparatus;

receive a first request from the device over the bus, the request is to indicate a new voltage or current specification;

determine whether the adjustable power source can meet the request, and to send a decision of the determination to the device; and

send a second request to the adjustable power source when it is determined that a power transmitter unit (PTU) is to adjust its wireless power transmission, wherein the adjustment determination is made based on real-time power consumption needs of the system under different software demand scenarios, including at least one of: “idle,” “web browsing,” and “video playback”.

18. The machine readable storage media of claim 17 having machine readable instructions that when executed cause the machine to perform an operation which comprises:

send a second message to the device, the second message is to indicate that the requested new voltage or current specification based power supply is being provided to the device.

19. The machine readable storage media of claim 18, wherein the first message is a Source_Capabilities message of a Universal Serial Bus (USB) Power Delivery Specification, and wherein the second message is a Power Supply Ready message of the USB Power Delivery Specification.

20. The machine readable storage media of claim 17 having machine readable instructions that when executed cause the machine to perform an operation which comprises:

receive a second request to provide a fixed power supply; and

provide a fixed power supply to the device in response to the second request.

21. The machine readable storage media of claim 17 having machine readable instructions that when executed cause the machine to perform an operation which comprises:

receive a third request to provide a power supply to charge a battery; and

provide a power supply to the battery in response to the third request.

22. The machine readable storage media of claim 17 having machine readable instructions that when executed cause the machine to perform an operation which comprises:

receive a fourth request to provide a variable power supply; and

provide a variable power supply to the device in response to the fourth request.