CLAIMS:

1. A wireless energy transfer system comprising:

a transmitter configured to beam scan RF radiation across a plurality of sectors at a first frequency,

a receiver storing energy from the RF radiation, and sending an acknowledgements signal at a second frequency, the first frequency being significantly different from the second frequency, and

a controller configured to direct wireless energy transfer from the transmitter substantially at the receiver based on the acknowledgements signal.

2. The system in claim 1 wherein the first frequency is in an ISM band.

3 The system in claim 2 wherein the ISM band is substantially located about 2.45GHz or 5.80GHz.

4. The system in any of the preceding claims wherein the second frequency is in an RFID band.

5. The system in claim 4 wherein the RFID band is substantially located about 866-869 MHz or 310 to 320MHz.

6. The system in any preceding claim wherein the transmitter comprises a steerable phased array antenna.

7. The system in any preceding claim wherein the receiver comprises a first omnidirectional antenna to receive the first frequency and a second omnidirectional antenna to send on the second frequency.

8. The system in claim 7 wherein the receiver further comprises a battery or super capacitor configured to store the energy from the first omnidirectional antenna.

9. The system in claim 8 wherein the receiver further comprises a function generator configured to generate very low frequency pulses from the battery or super capacitor and a voltage controlled oscillator to generate the second frequency from the very low frequency pulses.

10. The system in any preceding claim wherein the acknowledgement signal includes a unique identifier of the receiver.

~~10~~11. A method of locating a receiver relative to a transmitter comprising:

scanning a beam of RF radiation over a plurality of sectors;

receiving an acknowledgement signal from one or more sectors; and

determining the location of the receiver based on which sector had the strongest acknowledgement.

~~11~~12. A method of wireless energy transfer comprising:

locating a receiver according to claim ~~8~~11; and

focussing RF radiation at the receiver's location.

~~12~~13. The method of claim ~~11~~ 12 further comprising tracking any change in the receiver's location.

~~13~~14. The method of claim ~~12~~ 13 wherein the acknowledgement is at a substantially lower frequency than the beam of RF radiation.

15. A receiver comprising:

a first antenna configured to receive the radio frequency radiation at a first frequency from a transmitter;

a second antenna configured to send an acknowledgement signal at a second frequency;

a battery or super capacitor configured to store the energy from the radio frequency radiation at the first frequency received by the first antenna;

a function generator configured to generate very low frequency pulses and to be powered by the battery or super capacitor; and

a voltage controlled oscillator configured to generate the radio frequency radiation at the second frequency from the very low frequency pulses.

16. The receiver in claim 15, wherein the first frequency is in an ISM band.

17. The receiver in claim 16, wherein the ISM band is substantially located about 2.45GHz or 5.80GHz.

18. The receiver in any of claims 15 to 17, wherein the second frequency is in an RFID band.

19. The receiver in claim 18, wherein the RFID band is substantially located about 866-869 MHz or 310 to 320MHz.

20. The receiver in any of claims 15 to 19, wherein the acknowledgement signal includes a unique identifier of the receiver.