CLAIMS

Therefore, the following is claimed:

1. A system, comprising:

a guided surface waveguide probe adjusted to launch a first guided surface wave at a first frequency along a terrestrial medium, wherein the guided surface waveguide probe comprises a charge terminal elevated over the terrestrial medium configured to generate at least one resultant field that synthesizes a wave front incident at a complex Brewster angle of incidence ($\theta_{i,B}$) of the terrestrial medium; and

a portion of the guided surface waveguide probe being configured to operate as a receive circuit, the receive circuit being tuned to receive a second guided surface wave at a second frequency.

2. The system of claim 1, wherein the charge terminal is one of a plurality of charge terminals.

3. The system of claim 1, further comprising a feed network electrically coupled to the charge terminal, the feed network providing a phase delay (Φ) that matches a wave tilt angle (Ψ) associated with the complex Brewster angle of incidence ($\theta_{i,B}$) associated with the lossy conducting medium in the vicinity of the guided surface waveguide probe.

4. The system of claim 1, 2, or 3, wherein the guided surface waveguide probe comprises a first guided surface waveguide probe, and the receive circuit is inductively coupled to an electrical load, the electrical load being experienced as a load at an excitation source coupled to a second guided surface waveguide probe generating the second guided surface wave.

5. The system of claim 1, 2, 3, or 4, wherein the first guided surface wave has a contour that decays exponentially as a function of a distance from the guided surface waveguide probe.

6. The system of claim 1, 2, 3, 4, or 5, wherein the receive circuit further comprises a portion of a coil coupled to a charged reservoir at a first end of the coil and coupled to ground at a second end of the coil.

7. The system of claim 1, 2, 3, 4, 5, or 6,, wherein the receive circuit further comprises a portion of a coil coupled to a charged reservoir at a first location and coupled to an isolation device at a second location of the coil, the isolation device being coupled to the ground.

8. The system of claim 1, 2, 3, 4, 5, 6, or 7, wherein the receive circuit is coupled to a voltage regulation circuit configured to regulate a voltage from the receive circuit for an electrical load.

9. The system of claim 8, wherein the voltage regulation circuit provides the voltage to a power source.

10. A method, comprising:

launching a first guided surface wave at a first frequency via a guided surface waveguide probe, the first guided surface wave being launched along a surface of a terrestrial medium, wherein the guided surface waveguide probe comprises a charge terminal elevated over the terrestrial medium configured to generate at least one resultant field that synthesizes a wave front incident at a complex Brewster angle of incidence ($\theta_{i,B}$) of the terrestrial medium; and

receiving a second guided surface wave at a second frequency by configuring a portion of the guided surface waveguide probe to operate as a tuned resonator.

11. The method of claim 10, wherein the generation of the resultant field provides the complex Brewster angle of incidence at least at a Hankel crossover distance from the guided surface waveguide probe.

12. The method of claim 10 or 11, further comprising supplying electrical energy embodied in the second surface guided wave to an electrical load coupled to the tuned resonator of the guided surface waveguide probe.

13. The method of claim 10, 11, or 12, wherein the guided surface waveguide probe is a single phase probe having a charge terminal.

14. The method of claim 10, 11, 12, or 13, wherein the first guided surface wave embodies an amplitude modulation signal.

15. The method of claim 13 or 14, wherein the charge terminal is one of a plurality of charge terminals.

16. A system, comprising:

a guided surface waveguide probe adjusted to launch energy in a form of a first guided surface wave, wherein the guided surface waveguide probe comprises a charge terminal elevated over the terrestrial medium configured to generate at least one resultant field that synthesizes a wave front incident at a complex Brewster angle of incidence ($\theta_{i,B}$) of the terrestrial medium; and

means for configuring a receive circuit from a portion of the guided surface waveguide probe, the receive circuit being tuned to receive a second guided surface wave.

17. The system of claim 16, wherein the generation of the resultant field provides the complex Brewster angle of incidence at least at a Hankel crossover distance from the guided surface waveguide probe.

18. The system of claim 16 or 17, wherein the receive circuit further comprises a portion of a coil coupled to a ground at a first location of the coil and coupled to an isolation device at a second location of the coil, the isolation device being coupled to a compensation terminal.

19. The system of claim 16, 17, or 18, wherein the receive circuit is inductively coupled to a voltage regulation circuit configured to regulate a voltage from the receive circuit for an electrical load.