CLAIMS

1. A system for deploying wireless network resources comprising an expanse of material with multiple wireless resource components placed at different locations along a length of the expanse, wherein the expanse is capable of being positioned such that different portions of the length of the expanse extend in different directions within a three-dimensional space, wherein the expanse carries power and signaling interfaces to connect the multiple wireless resource components to allow them to participate in a functioning wireless network, and wherein the multiple wireless resource components are selectable by the system to form a subset of wireless resource components for wireless transmission and reception based on one or more locations and one or more antenna patterns.

2. The system of claim 1 wherein the system is able to select the subset of the wireless resource components based on at least one of: optimality, network needs, operator requests, wireless conditions, and client demand.

3. The system of claim 3 further comprising a resource manager that ensures that the selection does not exceed the available resources that can be delivered along the expanse.

4. The system of claim 1 wherein the expanse is at least one of: flexible, foldable, rigid, cuttable during installation to an operational length, able to be rolled, and a strip.

5. The system of claim 4 wherein the expanse comprises a flexible printed circuit board.

6. The system of claim 1 wherein wireless resource components comprise at least one of: an antenna, an antenna switch, a wireless transceiver, a wireless baseband converter, a microcontroller, a CPU, and memory.

7. The system of claim 6 wherein the expanse comprises at least one unit itself

comprising at least one CPU, at least one wireless transceiver attached to the CPU, and at least one antenna electrically attached to the transceiver.

8. The system of claim 7 wherein the antennas are selectable using antenna switches.

9. The system of claim 7 wherein some antennas vary according to at least one of: directionality, polarization, and pattern.

10. The system of claim 1 wherein at least one wireless resource component is at least one of: a surface mountable package solder mounted to the expanse, a distinct apparatus physically attached to the expanse with electrical connections at necessary locations, foil adhered to the expanse, and printed onto the expanse.

11. The system of claim 1 wherein the wireless network is at least one of: IEEE 802.11, Bluetooth, and CBRS.

12. The system of claim 1 wherein the signaling interfaces include at least one of: a high speed bus, an addressable backplane, a broadcast network, and Ethernet protocols.

13. The system of claim 1 further comprising at least one head end that connects to the expanse, wherein at least one of power and signaling is supplied by the head end, and wherein at least one of the power and signaling interfaces is connected to the head end.

14. A method for deploying wireless network resources comprising:

a. providing an expanse of material,

b. connecting onto the expanse multiple wireless resource components at different locations along a length of the expanse, wherein the expanse is capable of being positioned such that different portions of the length of the expanse extend in different directions within a three-dimensional space,

c. providing power and signaling interfaces to the expanse,

d. connecting the power and signaling interfaces to the multiple wireless resource components, and

e. joining the wireless resources into a functioning wireless network, wherein the wireless resources are selectable to form a subset of wireless resources for wireless transmission and reception based on one or more locations and one or more antenna patterns.

15. The method of claim 14 further comprising: selecting the subset of the wireless resources based on at least one of: optimality, network needs, operator requests, wireless conditions, and client demand.

16. The method of claim 14 further comprising, managing resources to ensure that the selection does not exceed the available resources that can be delivered along the expanse.

17. The method of claim 14 wherein the expanse is at least one of: flexible, foldable, rigid, cuttable during installation to an operational length, able to be rolled, and a strip.

18. The method of claim 14 wherein the expanse comprises a flexible printed circuit board.

19. The method of claim 14 wherein wireless resource components comprise at least one of: an antenna, an antenna switch, a wireless transceiver, a wireless baseband converter, a microcontroller, a CPU, and memory.

20. The method of claim 19 wherein the expanse comprises at least one unit itself comprising at least one CPU, at least one wireless transceiver attached to the CPU, and at least one antenna electrically attached to the transceiver.

21. The method of claim 20 wherein the antennas are selectable using antenna switches.

22. The method of claim 20 wherein some antennas vary according to at least one

of: directionality, polarization, and pattern.

23. The method of claim 14 wherein at least one wireless resource component is at least one of: a surface mountable package solder mounted to the expanse, a distinct apparatus physically attached to the expanse with electrical connections at necessary locations, foil adhered to the expanse, and printed onto the expanse.

24. The method of claim 14 wherein the wireless network is at least one of: IEEE 802.11, Bluetooth, and CBRS.

25. The method of claim 14 wherein the signaling interfaces include at least one of: a high speed bus, an addressable backplane, a broadcast network, and Ethernet protocols.

26. The method of claim 14 further comprising, making available to the expanse at least one location a head end that at least supplies power and signaling, wherein the head end connects to at least one of the power and signaling interfaces.