Claims:

1. A method for communicating amongst wireless sensor devices configured to connect to a wireless sensor network, the method executed at a first wireless sensor device and comprising:

transmitting a beacon signal to a second wireless sensor device, wherein the beacon signal is transmitted while the first and second wireless sensor devices are disconnected from the sensor network;

facilitating supplemental network formation by transmitting information to the second wireless sensor device, wherein the information causes the second wireless sensor device to form the supplemental network by performing network joining procedures with the first wireless sensor device, and wherein, after performing network joining procedures, the second wireless sensor device transmits status information to the first wireless sensor device;

receiving the status information from the second wireless sensor device;

queuing the status information;

connecting to the wireless sensor network subsequent to queuing the status information; and

transmitting the status information to a gateway of the wireless sensor network.

2. The method of claim 1, wherein sensor devices in the wireless sensor network provide a hop-count and cost function according to a common format, and wherein the method further comprises:

setting a hop count and cost function according to the common format and while disconnected from the wireless sensor network, wherein the information transmitted to the second sensor device includes the hop count and cost function set according to the common format.

3. The method of claim 2, wherein transmitting the status information to a gateway of the wireless sensor network includes transmitting the status information to a next-hop wireless sensor device in the network, wherein the next-hop wireless sensor device routes the status information to the gateway of the wireless sensor network.

4. The method of claim 3, further comprising:

receiving a beacon from the next-hop wireless sensor device prior to connecting to the wireless sensor network; and

performing wireless sensor network joining procedures with the next-hop wireless sensor device, wherein performing the joining procedures includes receiving a hop count and cost function associated with the next-hop wireless sensor device.

5. The method of claim 4, further comprising:

setting a new hop count and cost function based on the received hop count and cost function associated with the next-hop wireless sensor network;

transmitting the new hop count and cost function to the second wireless sensor device, wherein the second wireless sensor device uses the new hop count and cost function to set a default interface for transmitting additional status information to the gateway.

6. The method of claim 1, wherein connecting to the wireless sensor network triggers transmitting the status information to a gateway of the wireless sensor network.

7. The method of claim 1, wherein subsequent to performing network joining procedures with the first sensor device, the second sensor devices expands the supplemental network by forming a connection with a third sensor device, wherein the third sensor device is disconnected from the wireless sensor network when the connection is formed.

8. The method of claim 7, wherein the status information from the second sensor device includes information registered by a sensor component of the second sensor device and information registered by a sensor component of the third sensor device.

9. An apparatus configured to connect to a wireless network, the apparatus comprising:

an antenna for transmitting a beacon signal to a wireless device while the apparatus and wireless device are disconnected from the wireless network;

a processor configured to facilitate supplemental network formation by causing information to be transmitted to the wireless device, wherein the information causes the wireless

device to form the supplemental network by performing network joining procedures with the apparatus, and wherein, after performing network joining procedures, the wireless device transmits status information to the apparatus;

a receiving mechanism configured to receive the status information from the wireless device;

a memory queue configured to store the status information,

wherein the processor is further configured to connect the apparatus to the wireless network and to cause status information received by the receiving mechanism to be transmitted to a gateway of the wireless network.

10. The apparatus of claim 9, wherein devices in the wireless sensor network provide a hop-count and cost function according to a common format, and wherein the processor is further configured to:

set a hop count and cost function according to the common format and while disconnected from the wireless network, wherein information transmitted to the wireless device includes the hop count and cost function set according to the common format.

11. The apparatus of claim 10, wherein transmitting status information to a gateway of the wireless network includes transmitting the status information to a next-hop wireless node in the network, wherein the next-hop wireless node is configured to route the status information to the gateway of the wireless network.

12. The apparatus of claim 12, wherein:

the receiving mechanism is further configured to receive a beacon from the next-hop wireless device prior to the apparatus being connected to the wireless network; and

the processor is configured to cause the apparatus to perform wireless network joining procedures with the next-hop wireless device, wherein performing the joining procedures includes receiving a hop count and cost function associated with the next-hop wireless device.

13. The apparatus of claim 12, wherein the processor is further configured to:

set a new hop count and cost function based on a received hop count and cost function associated with the next-hop wireless device;

cause the new hop count and cost function to be transmitted to the wireless device, wherein the wireless device uses the new hop count and cost function to set a default interface for transmitting additional status information to the gateway.

14. The apparatus of claim 9, wherein the processor is further configured to cause the status information to be transmitted to the gateway in response to the apparatus being connected to the wireless network.

15. A computer-program product for communicating amongst wireless sensor devices configured to connect to a wireless sensor network, the computer-program product tangibly embodied in a non-transitory machine-readable storage medium having instructions stored thereon, the instructions operable to cause a processing apparatus within a first wireless sensor device to perform operations including:

transmitting a beacon signal to a second wireless sensor device, wherein the beacon signal is transmitted while the first and second wireless sensor devices are disconnected from the sensor network;

facilitating supplemental network formation by transmitting information to the second wireless sensor device, wherein the information causes the second wireless sensor device to form the supplemental network by performing network joining procedures with the first wireless sensor device, and wherein, after performing network joining procedures, the second wireless sensor device transmits status information to the first wireless sensor device;

receiving the status information from the second wireless sensor device;

queuing the status information;

connecting to the wireless sensor network subsequent to queuing the status information; and

transmitting the status information to a gateway of the wireless sensor network.

16. The computer-program product of claim 15, wherein sensor devices in the wireless sensor network provide a hop-count and cost function according to a common format, and

wherein the operations further include:

setting a hop count and cost function according to the common format and while disconnected from the wireless sensor network, wherein the information transmitted to the second sensor device includes the hop count and cost function set according to the common format.

17. The computer-program product of claim 16, wherein transmitting the status information to a gateway of the wireless sensor network includes transmitting the status information to a next-hop wireless sensor device in the network, wherein the next-hop wireless sensor device routes the status information to the gateway of the wireless sensor network.

18. The computer-program product of claim 17, wherein the operations further include:

receiving a beacon from the next-hop wireless sensor device prior to connecting to the wireless sensor network; and

performing wireless sensor network joining procedures with the next-hop wireless sensor device, wherein performing the joining procedures includes receiving a hop count and cost function associated with the next-hop wireless sensor device.

19. The computer-program product of claim 18, wherein the operations further include:

setting a new hop count and cost function based on the received hop count and cost function associated with the next-hop wireless sensor network; and

transmitting the new hop count and cost function to the second wireless sensor device, wherein the second wireless sensor device uses the new hop count and cost function to set a default interface for transmitting additional status information to the gateway.

20. The computer-program product of claim 15, wherein connecting to the wireless sensor network triggers transmitting the status information to a gateway of the wireless sensor network.