CLAIMS

1. A method performed by a first internet of things (IoT) device, comprising:

establishing a first communication link between the first IoT device and a first network node of a local network;

monitoring connectivity of a client device within the local network; and

selecting, dynamically by the first IoT device, an operating role for the first IoT device in the local network, the operating role selected from between an endpoint role and a relay role, wherein selecting the operating role includes:

selecting the relay role as the operating role for the first IoT device when the relay role would enhance the connectivity for the client device that is within a wireless range of the first IoT device, wherein selecting the relay role includes: enabling an access point in the first IoT device, establishing a second communication link via a wireless association between the access point in the first IoT device and the client device, and bridging traffic associated with the client device via the first communication link and the second communication link, and

selecting the endpoint role as the operating role for the first IoT device when the first IoT device does not provide connectivity for any client devices in the local network, wherein the endpoint role includes disabling the access point.

2. The method of claim 1, further comprising, upon selecting the relay role:

changing the operating role of the first IoT device from the endpoint role to the relay role;

configuring the first IoT device to operate the access point as a relay node between the first network node and the client device; and

bridging the traffic in response to changing the configuration of the first IoT device to operate the access point as the relay node.

3. The method of claim 2, wherein the local network is a self-organizing network (SON), and wherein changing the operating role to the relay role includes advertising the relay role in an information element (IE) of a SON protocol message.

4. The method of claim 1, further comprising:

coordinating between the first IoT device and one or more other IoT devices in the local network to detect a position of the client device relative to the first IoT device and the one or more other IoT devices; and

selecting the operating role in association with the position of the client device.

5. The method of claim 1, further comprising:

sending, from the first IoT device to one or more network nodes of the local network, a message indicating that the first IoT device is capable of selecting the relay role.

6. The method of claim 1, further comprising:

broadcasting an advertisement message indicating that the first IoT device is capable of selecting the relay role;

receiving a request from the client device for a wireless association between the first IoT device and the client device; and

selecting the relay role in response to receiving the request from the client device.

7. The method of claim 1, further comprising:

determining to steer the client device from the first IoT device to a second network node in the local network; and

steering the client device to the second network node.

8. The method of claim 7, wherein the second network node is a second IoT device connected to the local network.

9. The method of claim 1, further comprising:

obtaining a first link metric for the first communication link between the first IoT device and a central access point of the local network;

obtaining a second link metric for a third communication link between a second network node and the central access point;

selecting the relay role when the first IoT device would provide a higher quality of service for the client device in association with a comparison of the first link metric and the second link metric; and

steering the client device to the second network node when the second network node would provide the higher quality of service for the client device in association with the comparison of the first link metric and the second link metric.

10. The method of claim 7, wherein steering the client device to the second network node includes:

reducing power for a wireless coverage area associated with the first IoT device.

11. The method of claim 7, further comprising, after steering the client device to the second network node:

selecting the endpoint role when no client devices are using the relay role of the first IoT device for bridging traffic to the local network.

12. The method of claim 1, wherein the first communication link between the first IoT device and the first network node includes a wireless connection to the first network node.

13. The method of claim 1, further comprising:

receiving a request to obtain diagnostic measurements associated with at least one other device in the local network;

utilizing a wireless interface of the first IoT device to obtain the diagnostic measurements associated with the request; and

transmitting the diagnostic measurements in response to the request.

14. A first internet of things (IoT) device, comprising:

a processor; and

memory coupled with the processor and having instructions stored therein which, when executed by the processor cause the first IoT device to:

establish a first communication link between the first IoT device and a first network node of a local network;

monitor connectivity of a client device within the local network;

select, dynamically by the first IoT device, an operating role for the first IoT device in the local network, the operating role selected from between an

endpoint role and a relay role, wherein the instructions, when executed by the processor, cause the first IoT device to:

select the relay role as the operating role for the first IoT device when the relay role would enhance connectivity for the client device that is within a wireless range of the first IoT device, wherein the relay role is associated with instructions that, when executed by the processor, cause the first IoT device to: enable an access point in the first IoT device, establish a second communication link via a wireless association between the access point in the first IoT device and the client device, and bridge traffic associated with the client device via the first communication link and the second communication link; and

select the endpoint role as the operating role for the first IoT device when the first IoT device does not provide connectivity for any client devices in the local network, wherein the endpoint role is associated with instructions that, when executed by the processor, cause the first IoT device to disable the access point.

15. The first IoT device of claim 14, wherein the instructions, when executed by the processor, further cause the first IoT device to, upon selecting the relay role:

change the operating role of the first IoT device from the endpoint role to the relay role;

configure the first IoT device to operate the access point as a relay node between the first network node and the client device; and

bridge the traffic in response to changing the configuration of the first IoT device to operate the access point as the relay node.

16. The first IoT device of claim 15, wherein the local network is a self-organizing network (SON), and wherein the instructions to change the operating role of the first IoT device to the relay role include instructions which, when executed by the processor, cause the first IoT device to advertise the relay role in an information element (IE) of a SON protocol message.

17. The first IoT device of claim 14, wherein the instructions, when executed by the processor, further cause the first IoT device to:

coordinate between the first IoT device and one or more other IoT devices in the local network to detect a position of the client device relative to the first IoT device and the one or more other IoT devices; and

select the operating role in association with the position of the client device.

18. The first IoT device of claim 14, wherein the instructions, when executed by the processor, further cause the first IoT device to:

send, from the first IoT device to one or more network nodes of the local network, a message indicating that the first IoT device is capable of selecting the relay role.

19. The first IoT device of claim 14, wherein the instructions, when executed by the processor, further cause the first IoT device to:

broadcast an advertisement message indicating that the first IoT device is capable of selecting the relay role;

receive a request from the client device for a wireless association between the first IoT device and the client device; and

select the relay role in response to receiving the request from the client device.

20. The first IoT device of claim 14, wherein the instructions, when executed by the processor, further cause the first IoT device to:

determine to steer the client device from the first IoT device to a second network node in the local network; and

steer the client device to the second network node.

21. The first IoT device of claim 14, wherein the instructions, when executed by the processor, further cause the first IoT device to:

obtain a request to obtain diagnostic measurements associated with at least one other device in the local network;

utilize a wireless interface of the first IoT device to obtain the diagnostic measurements associated with the request; and

provide the diagnostic measurements in response to the request.

22. A computer-readable medium having stored therein instructions which, when executed by a processor of a first internet of things (IoT) device, causes the first IoT device to:

establish a first communication link between the first IoT device and a first network node of a local network;

monitor connectivity of a client device within the local network;

select, dynamically by the first IoT device, an operating role for the first IoT device in the local network, the operating role selected from between an endpoint role and a relay role, wherein the instructions, when executed by the processor, cause the first IoT device to:

select the relay role as the operating role for the first IoT device when the relay role would enhance connectivity for the client device that is within a wireless range of the first IoT device, wherein the relay role is associated with instructions that, when executed by the processor, cause the first IoT device to: enable an access point in the first IoT device, establish a second communication link via a wireless association between the access point in the first IoT device and the client device, and bridge traffic associated with the client device via the first communication link and the second communication link; and

select the endpoint role as the operating role for the first IoT device when the first IoT device does not provide connectivity for any client devices in the local network, wherein the endpoint role is associated with instructions that, when executed by the processor, cause the first IoT device to disable the access point.

23. The computer-readable medium of claim 22, wherein the instructions, when executed by the processor, further cause the first IoT device to, upon selecting the relay role:

change the operating role of the first IoT device from the endpoint role to the relay role;

configure the first IoT device to operate the access point as a relay node between the first network node and the client device; and

bridge the traffic in response to changing the configuration of the first IoT device to operate the access point as the relay node.

24. The computer-readable medium of claim 22, wherein the instructions, when executed by the processor, further cause the first IoT device to:

coordinate between the first IoT device and one or more other IoT devices in the local network to detect a position of the client device relative to the first IoT device and the one or more other IoT devices; and

select the operating role in association with the position of the client device.

25. The computer-readable medium of claim 22, wherein the instructions, when executed by the processor, further cause the first IoT device to:

send, from the first IoT device to one or more network nodes of the local network, a message indicating that the first IoT device is capable of selecting the relay role.

26. The computer-readable medium of claim 22, wherein the instructions, when executed by the processor, further cause the first IoT device to:

broadcast an advertisement message indicating that the first IoT device is capable of selecting the relay role;

receive a request from the client device for a wireless association between the first IoT device and the client device; and

select the relay role in response to receiving the request from the client device.

27. The computer-readable medium of claim 22, wherein the instructions, when executed by the processor, further cause the first IoT device to:

obtain a request to obtain diagnostic measurements associated with at least one other device in the local network;

utilize a wireless interface of the first IoT device to obtain the diagnostic measurements associated with the request; and

provide the diagnostic measurements in response to the request.

28. The method of claim 1, further comprising:

detecting the client device in proximity to the first IoT device; and

obtaining, by the first IoT device, link metrics associated with a plurality of communication links of the local network; and

selecting the relay role associated with the link metrics being indicative that the first IoT device would enhance quality of service for the client device.

29. The method of claim 1, wherein the first IoT device is a camera, a drone, a wearable device, a home appliance, a lighting system, a security system component, a speaker, a smart refrigerator, or a television.

30. The method of claim 1, wherein enabling the access point in the first IoT device includes configuring a wireless interface of the first IoT device to mimic a configuration of another access point of the local network.

31. A method performed by a first internet of things (IoT) device, comprising:

establishing a first communication link between the first IoT device and a first network node of a local network, the first IoT device initially having an endpoint role as an operating role of the first IoT device in the local network;

detecting a client device of the local network;

changing, dynamically by the first IoT device, the operating role of the first IoT device from the endpoint role to a relay role to enhance connectivity for the client device;

configuring, in the relay role, a wireless interface of the first IoT device to mimic a configuration of an access point (AP) of the local network;

establishing a second communication link between the AP and the client device via the wireless interface; and

bridging traffic between the client device and the local network via the first communication link and the second communication link.

32. The method of claim 31, further comprising:

dynamically selecting between the endpoint role and the relay role in association with a relative position of the client device to the first IoT device compared to one or more network nodes of the local network.

33. The method of claim 31, further comprising:

establishing the first communication link via a first communication interface of the first IoT device, the first communication interface different from the wireless interface; and

selectively enabling or disabling the wireless interface in the relay role or endpoint role, respectively.

34. The method of claim 31, further comprising:

establishing the first communication link via the wireless interface of the first IoT device; and

alternating the wireless interface between the first communication link and the second communication link.