Hybrid IoT Network By: ayush

Wireless mesh network:

the network connection is spread out among dozens or even hundreds of wireless mesh nodes that "talk" to each other to share the network connection across a large area.

Mesh nodes are small radio transmitters that function in the same way as a wireless router.

How it works:

* <https://computer.howstuffworks.com/how-wireless-mesh-networks-work.htm#:~:text=In%20a%20wireless%20mesh%20network,connection%20across%20a%20large%20area.&text=Mesh%20nodes%20are%20small%20radio,way%20as%20a%20wireless%20router.>
* <https://www.intechopen.com/books/wireless-mesh-networks-security-architectures-and-protocols/an-overview-of-wireless-mesh-networks>
* <https://www.hindawi.com/journals/js/2016/2081902/>

working of wifi:

<https://www.i-programmer.info/programming/hardware/2767-how-wifi-works.html>

Arduino :

<https://www.arduino.cc/en/guide/introduction>

<https://www.watelectronics.com/arduino-uno-board-tutorial-and-its-applications/>

esp8266 tutorial:

<https://www.deviceplus.com/arduino/esp8266-setup-tutorial-using-arduino/>

NRF and its working:

(nRF24L0 is a Transceiver IC i.e. both the transmitter and receiver are integrated on the same IC)

<https://www.electronicshub.org/nrf24l01-transceiver-module/#:~:text=There%20is%20another%20important%20difference,integrated%20on%20the%20same%20IC.>

<https://lastminuteengineers.com/nrf24l01-arduino-wireless-communication/>

Arduino code with explanation:

<https://howtomechatronics.com/tutorials/arduino/arduino-wireless-communication-nrf24l01-tutorial/>

<https://create.arduino.cc/projecthub/muhammad-aqib/nrf24l01-interfacing-with-arduino-wireless-communication-0c13d4>

NRF using 6 channel/multiple netwok:

<https://howtomechatronics.com/tutorials/arduino/how-to-build-an-arduino-wireless-network-with-multiple-nrf24l01-modules/>

<https://www.instructables.com/id/Wireless-Remote-Using-24Ghz-NRF24L01-Module-With-A/>

nodemcu with NRF:

<https://how2electronics.com/esp8266-nrf24l01-gateway-arduino-node/>

why 2 wifi interface with each other:

<https://www.digitalcitizen.life/layman-guide-solving-wireless-network-interference-problems>

(orthogonality principal: used in 3G and advance communication)

While designing the network we need to focus also on routing protocols:

Links for types of routing protocols:

<https://www.routerfreak.com/understanding-network-routing-protocols/>

<https://github.com/moarpepes/awesome-mesh>

we will be using DYNAMIC SOURCE ROUTING:

<http://www.cse.iitd.ac.in/~mcs142144/documents/DSR_thesis.pdf>