MESHTASTIC

BASICS

What is Meshtastic – Use Case

- No Cellular Coverage
- No Wi-Fi Coverage

- How would you communicate without relying on significant infrastructure?

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What is Meshtastic – App Vs Node

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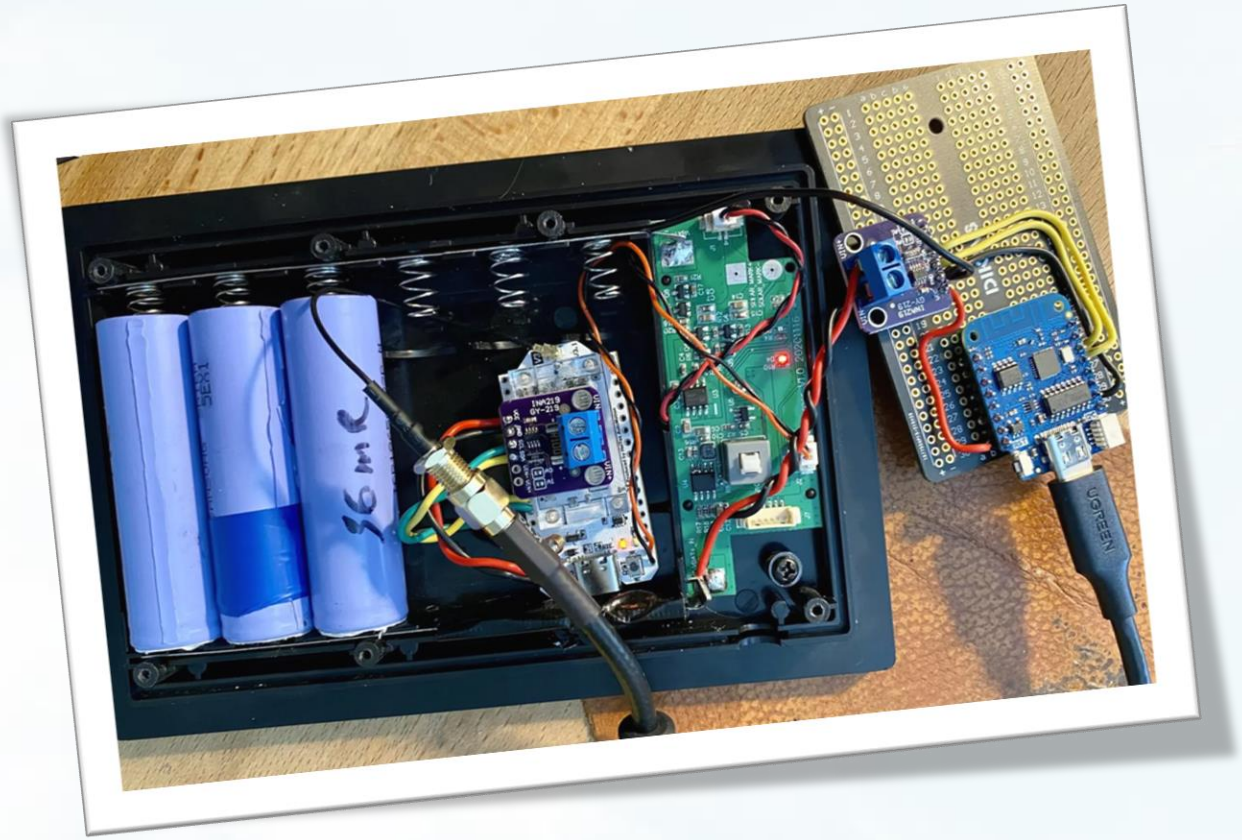
What is Meshtastic – Node Hardware



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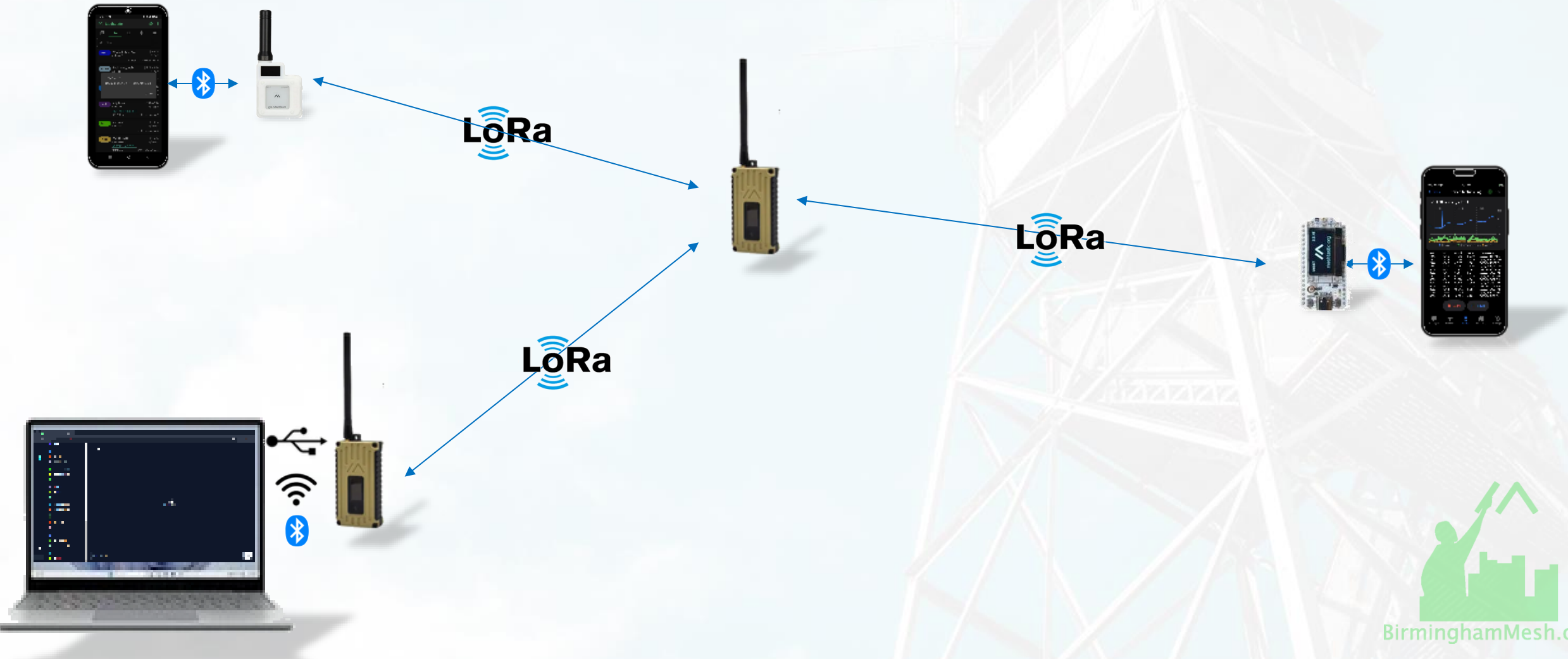
What is Meshtastic – Mesh Networking



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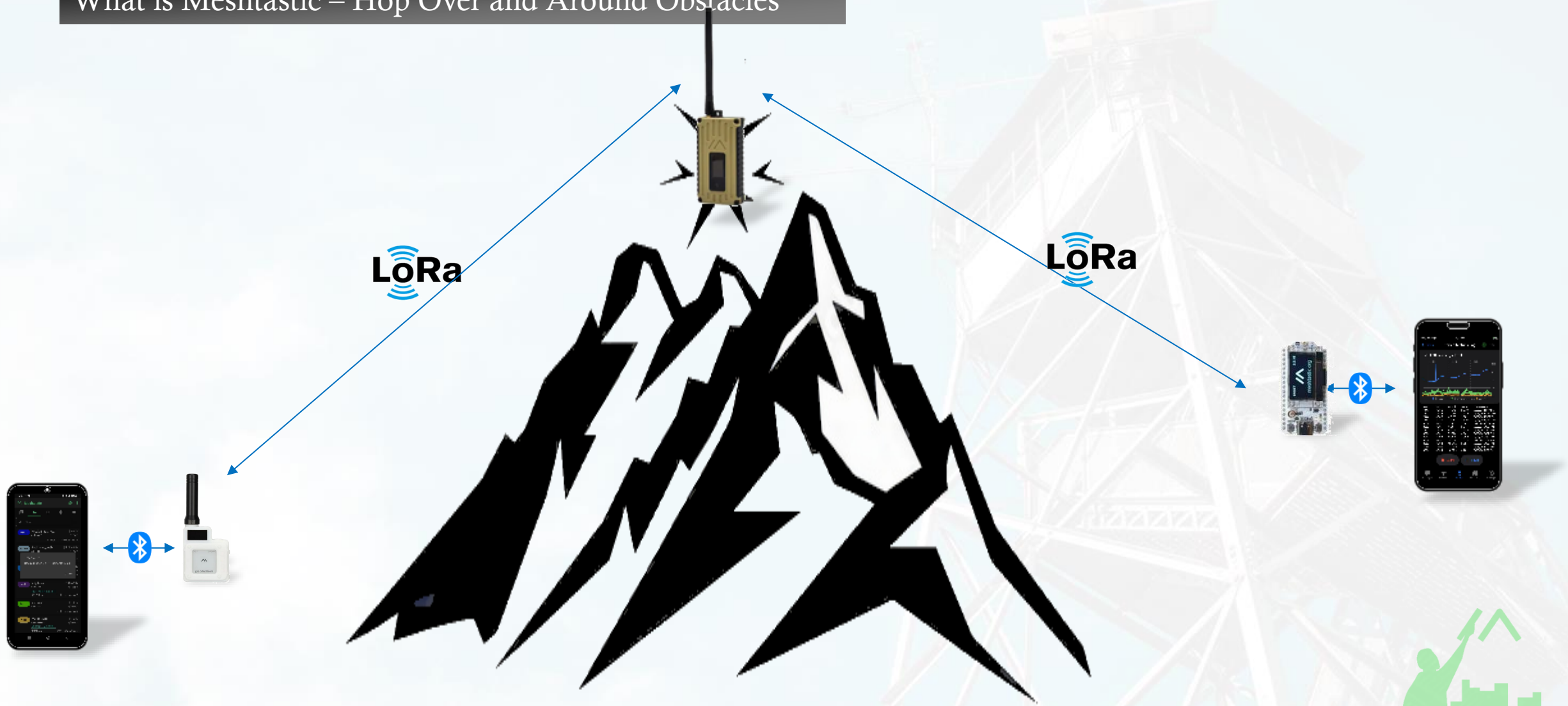
What is Meshtastic – Hop Over and Around Obstacles



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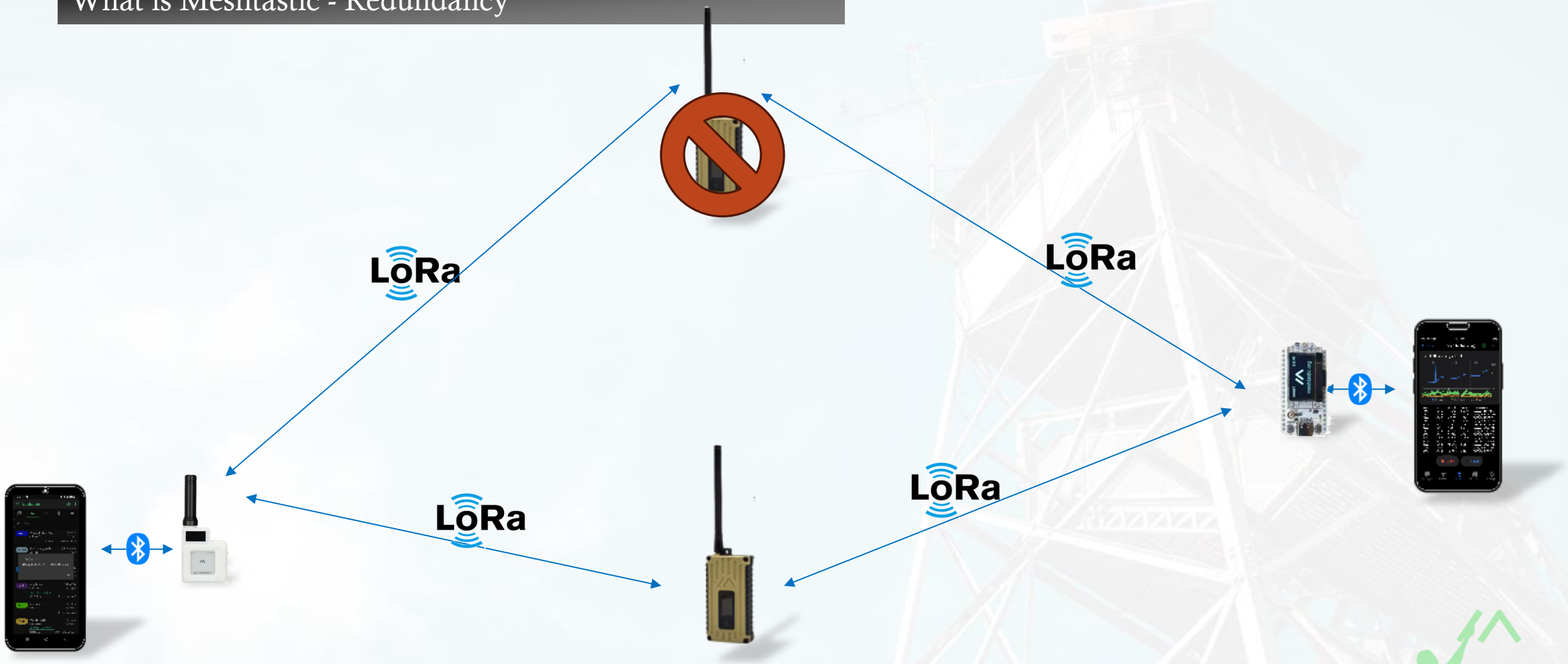
What is Meshtastic - Redundancy



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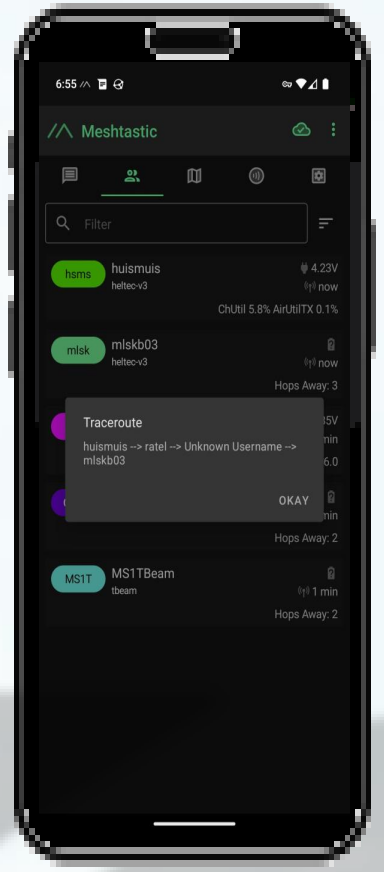
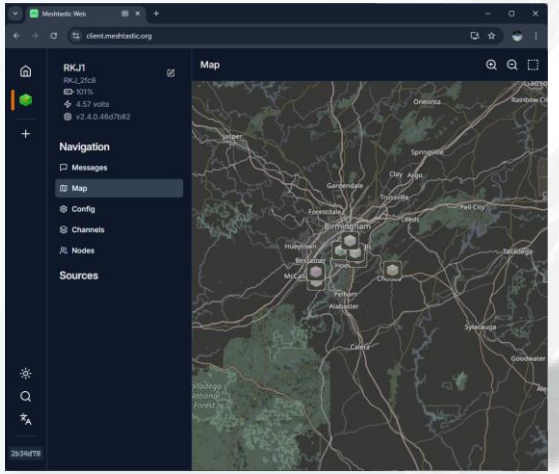
What is Meshtastic – The App(s)

Android

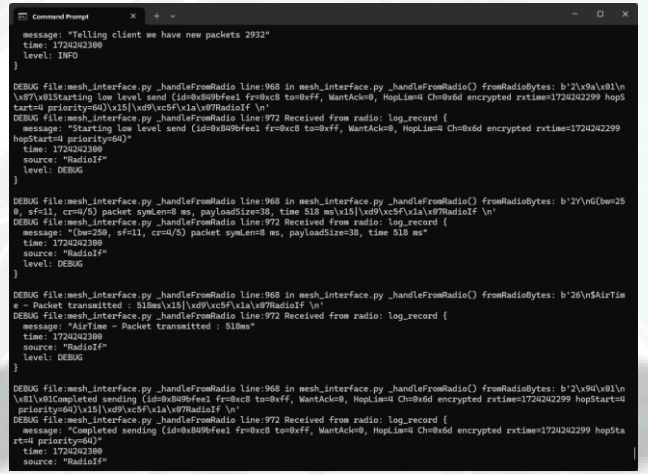
iOS



Web



CLI



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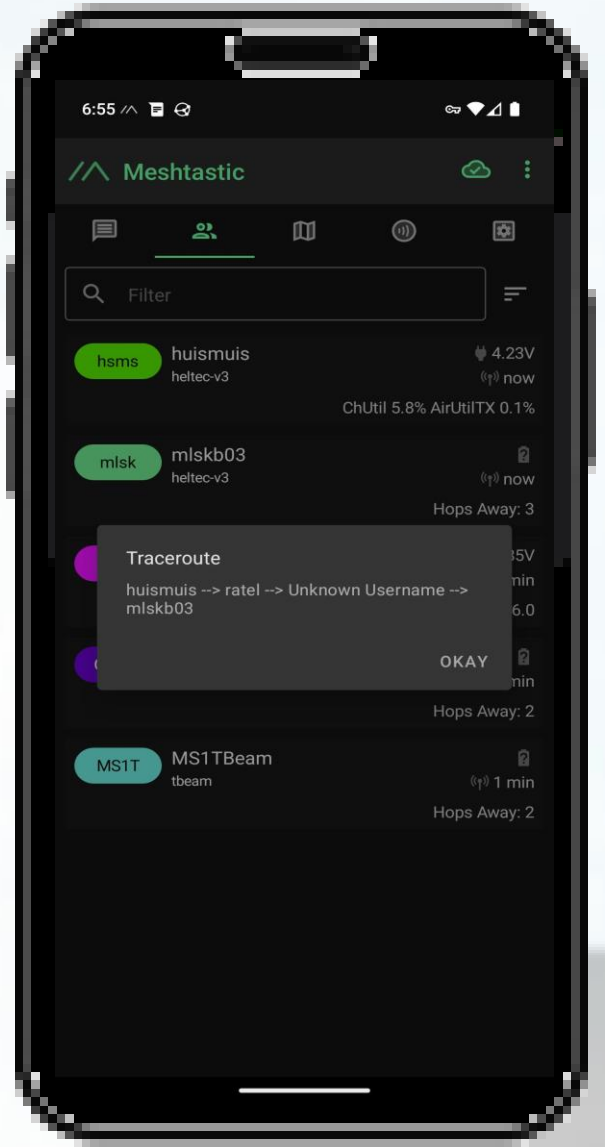
What is Meshtastic – Meshtastic Channels



0	LongFast CQ Meshtastic!
1	HamClub Where we eating?
2	NeighborhoodWatch That cow is out again.
3	Family Tell Summer to fill the tank!
4	DC205 What's the topic tonight?

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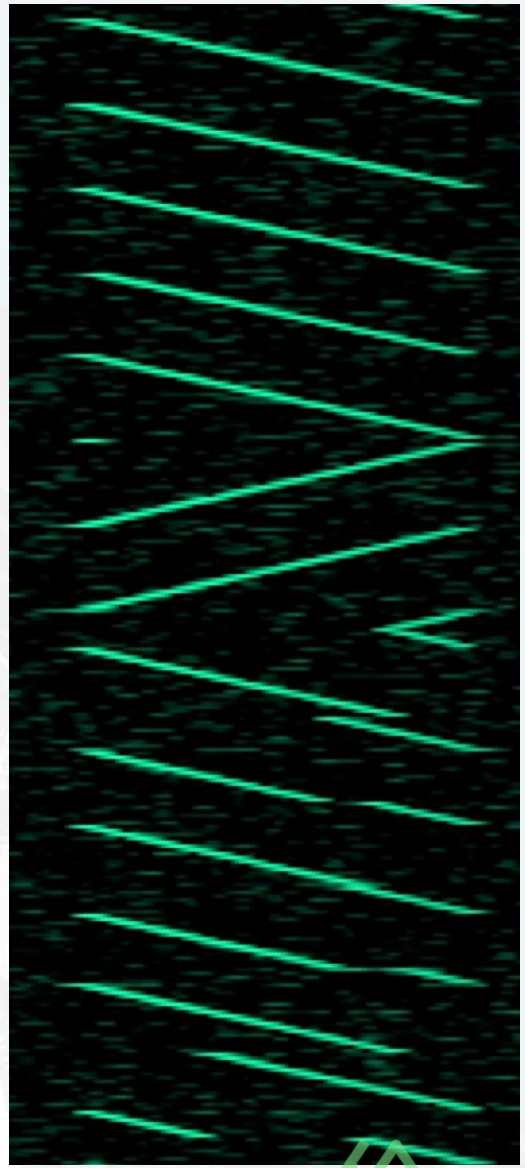
What is Meshtastic – Frequency, LoRa Slot, & Amateur Radio

- 915 MHz (ISM Band)
  - Shared with the 33cm Ham Band
  - Band Range = 902 to 928MHz
  - 104 frequency slots defined
  - Slot 20 is the default with its center at 906.875MHz

	Max Power	Encryption
Licensed Mode	Transmitter power <=1.5kW PEP	Illegal
Unlicensed Mode	+30db ERP / 1 Watt	Legal



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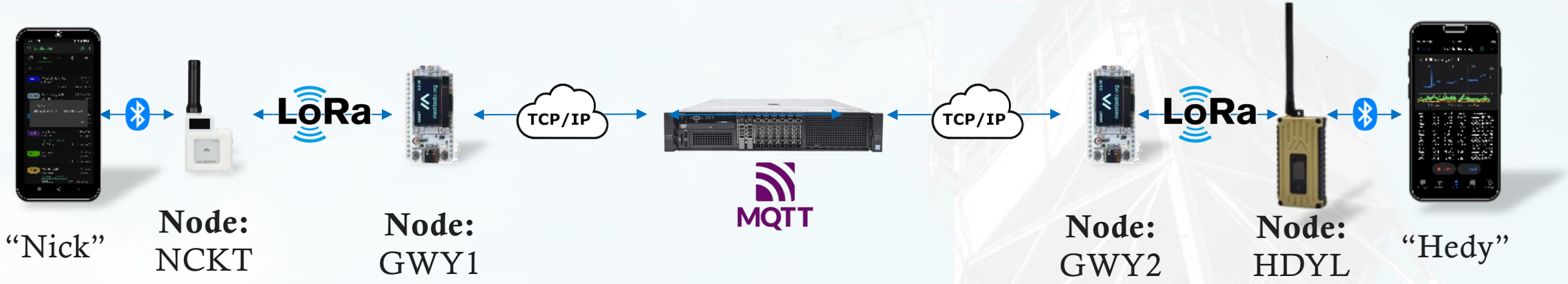
Meshtastic Via MQTT



Role:	Client
Meshtastic Channel:	MyClub
My Club UpLink / Downlink:	Enabled

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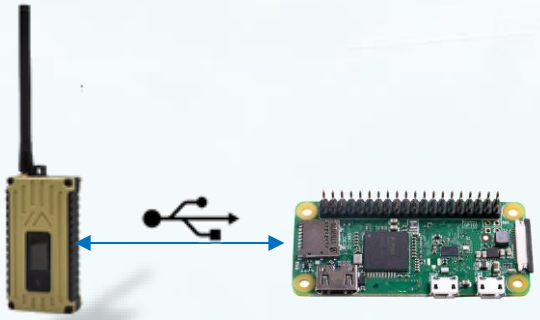
Meshtastic TC2 BBS

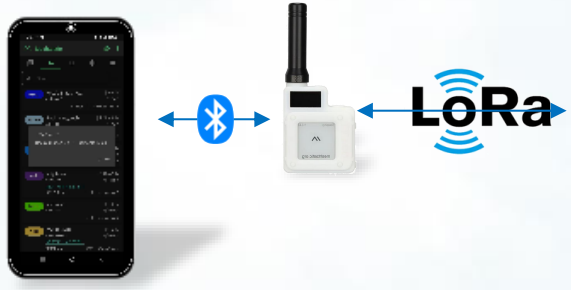
"Nick"

Node:
NCKT



Node:
BHM1

Raspberry Pi
BBS Server



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Appendix

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Appendix: Nerdy Details – LoRa US Frequency Bands

US	902 to 928 MHz	902.3 MHz to 914.9 MHz spaced at 200KHz (Upstream-64 channels) 903 MHz to 914.2 MHz spaced at 1.6 MHz apart (Upstream- 8 channels) 923.3 MHz to 927.5 MHz spaced at 600KHz apart (Downstream- 8 channels)

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