

Meshtastic Workshop



Meshtastic is an alternative communication network providing resilient mesh relay routing, low power consumption, and long-range capability



What We're Going to Cover

■ What is Meshtastic and LoRa?

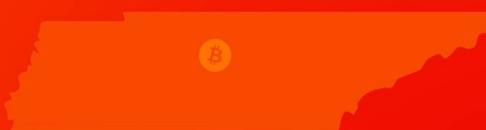
■ How to Install Device Firmware

■ Setting Up and Connecting the App

■ Meshtastic and Encryption

■ Optimizing the Network

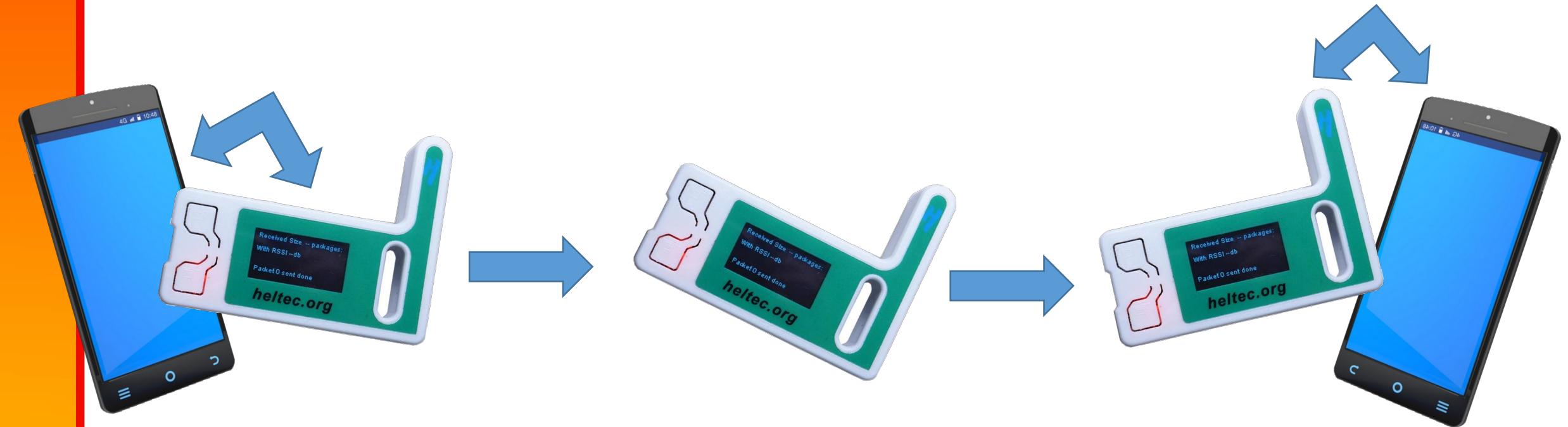
■ Practical Uses



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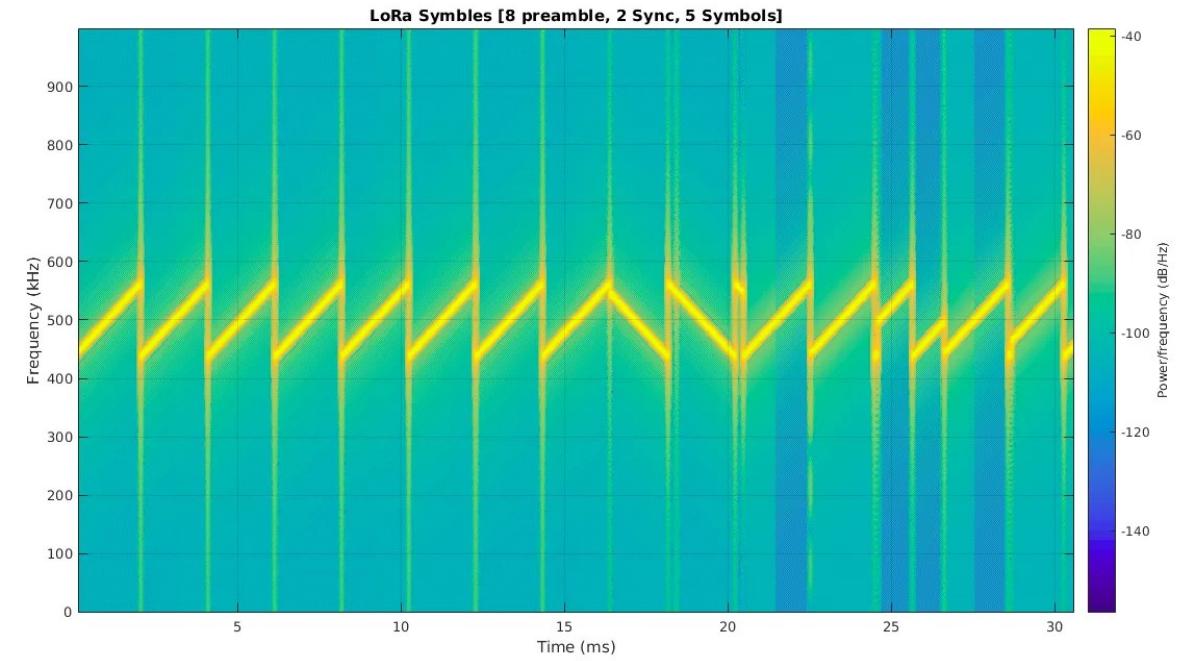
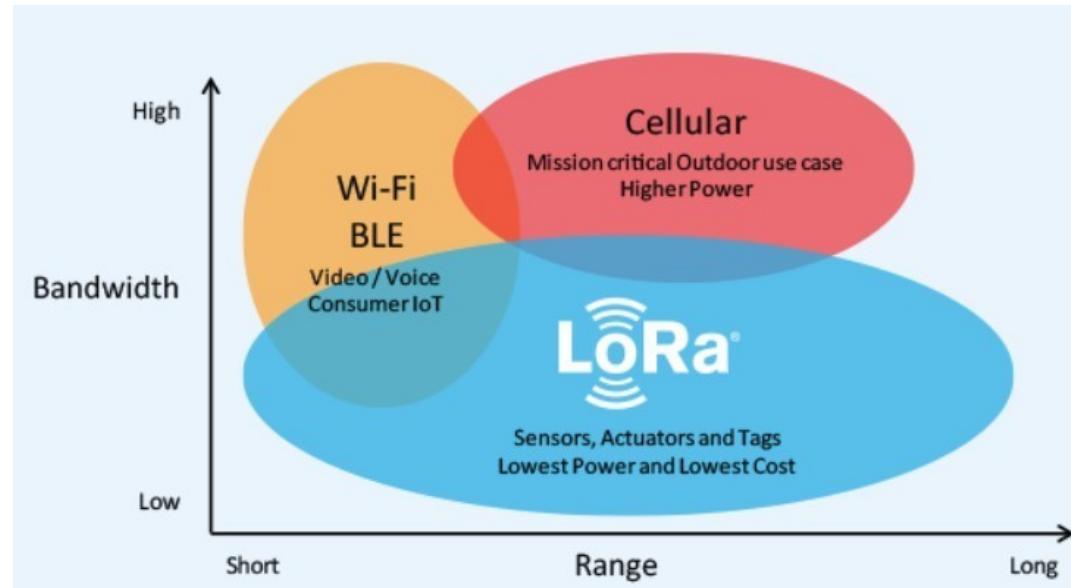
The Importance of LoRa and Meshtastic for Alternative Communication



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Understanding LoRa: Long Range, Low Power, Encrypted Communication for IoT and Beyond



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LoRa: A Key Technology for IoT and Secure Communication





Why Choose LoRa Over Ham Radio's APRS for Secure Communication?



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Introducing Meshtastic: The Open-Source Solution for Decentralized Communication



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Choosing the Right LoRa/Meshtastic Device

Custom Solar Setup



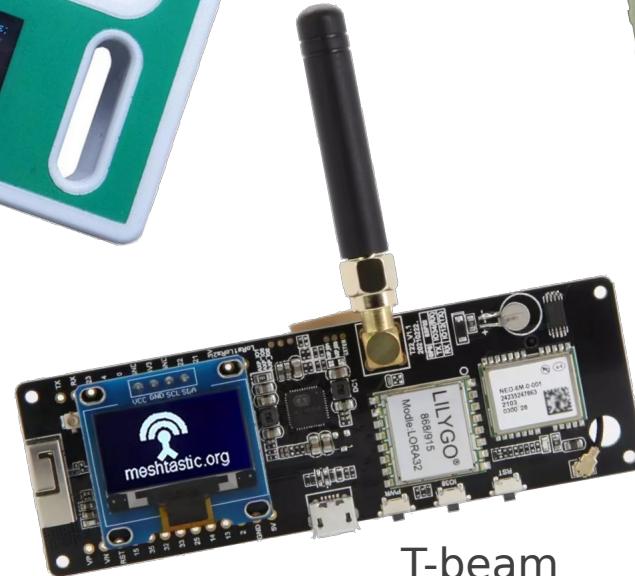
HeTec V3



T-deck



T-beam



Custom T-beam



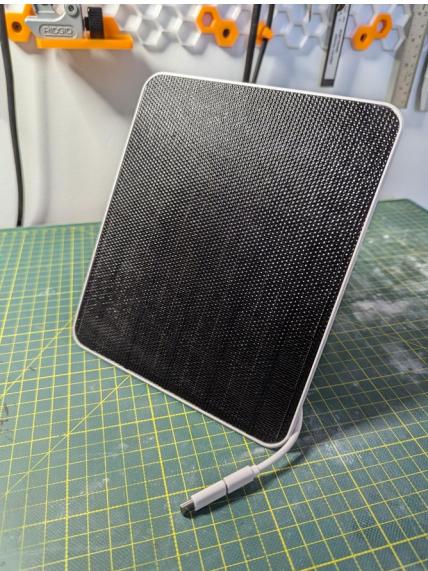
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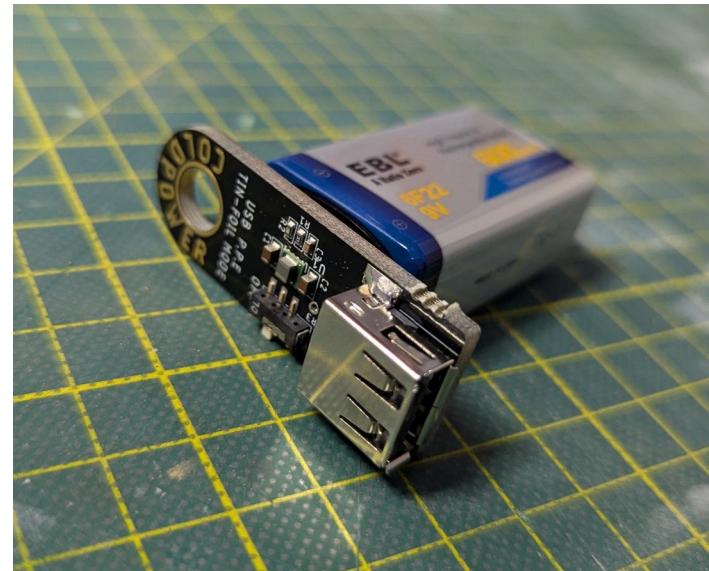
Setting Up Your Meshtastic Device: Power



LiPo
Battery



Small Solar
Panel



Coinkite
ColdPower

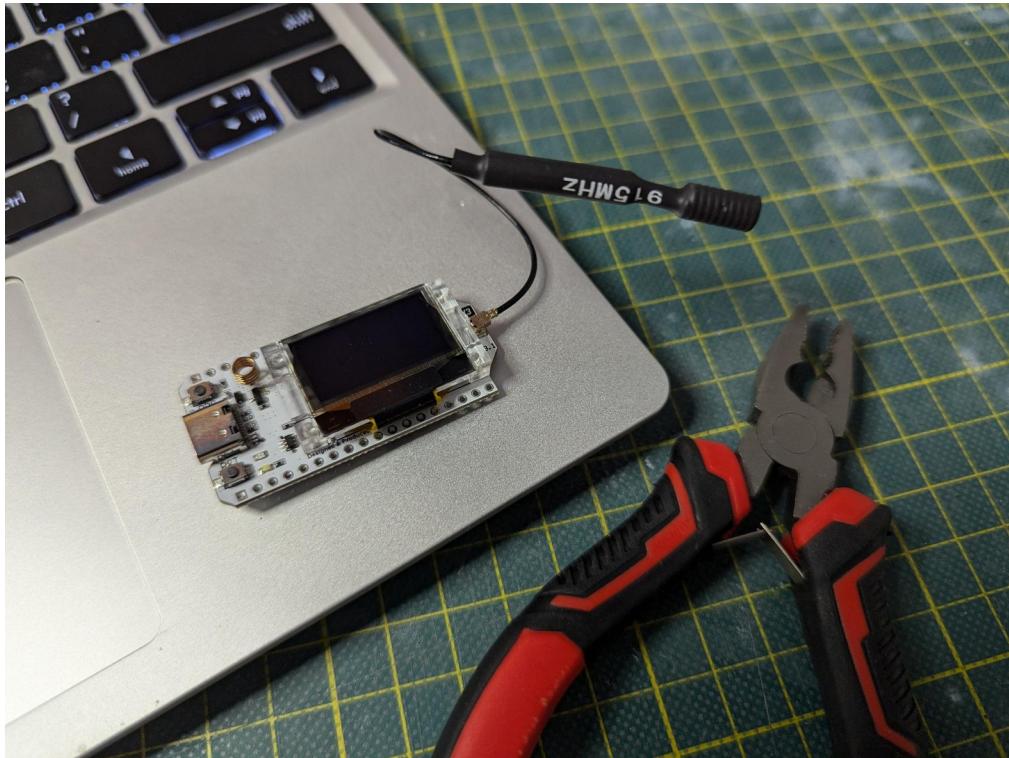


USB battery
bank

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Setting Up Your Meshtastic Device: Firmware Install

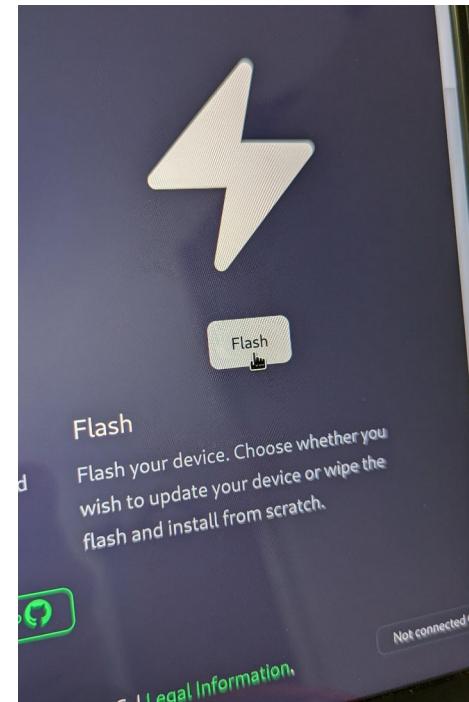
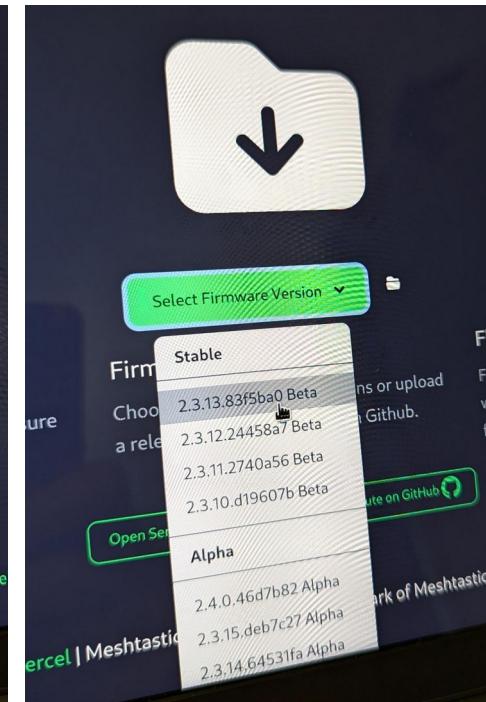
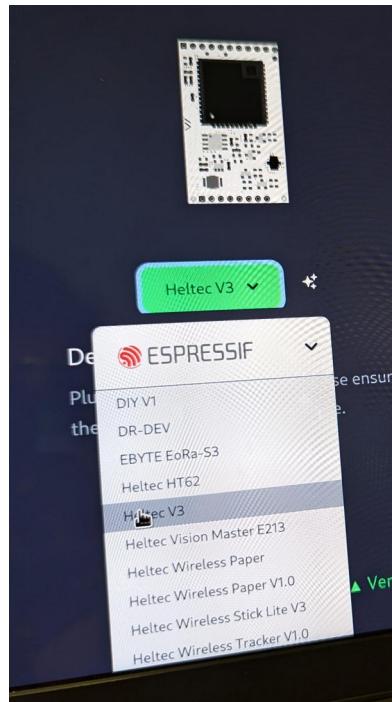


Connect to your computer via USB

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Setting Up Your Meshtastic Device: Firmware Install

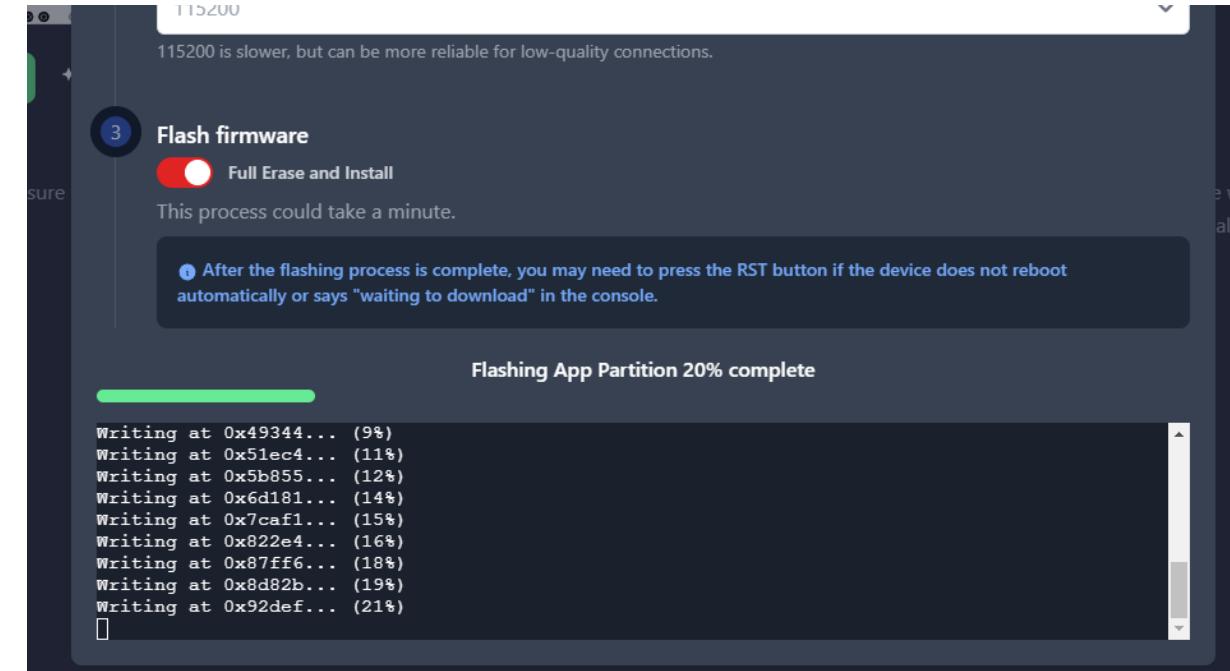
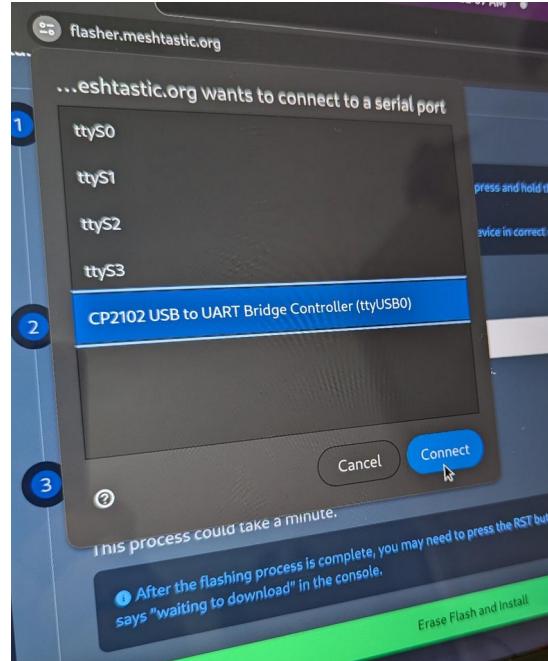
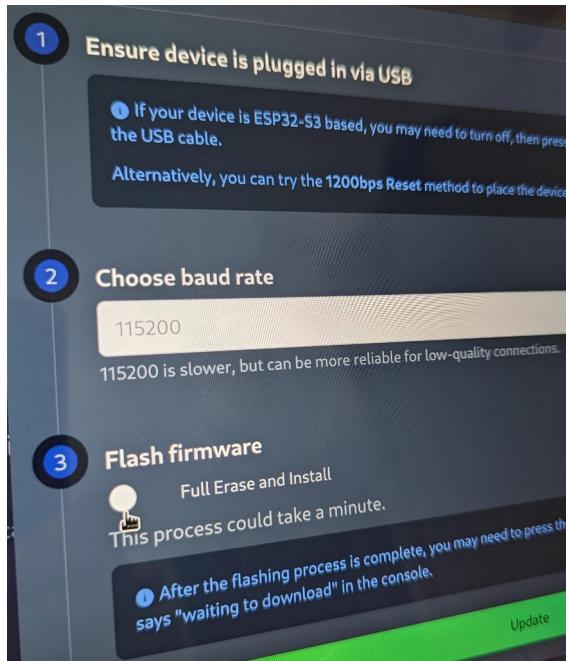


<https://flasher.meshtastic.org/>

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Setting Up Your Meshtastic Device: Firmware Install



<https://flasher.meshtastic.org/>



Setting Up Your Meshtastic Device: Firmware Install

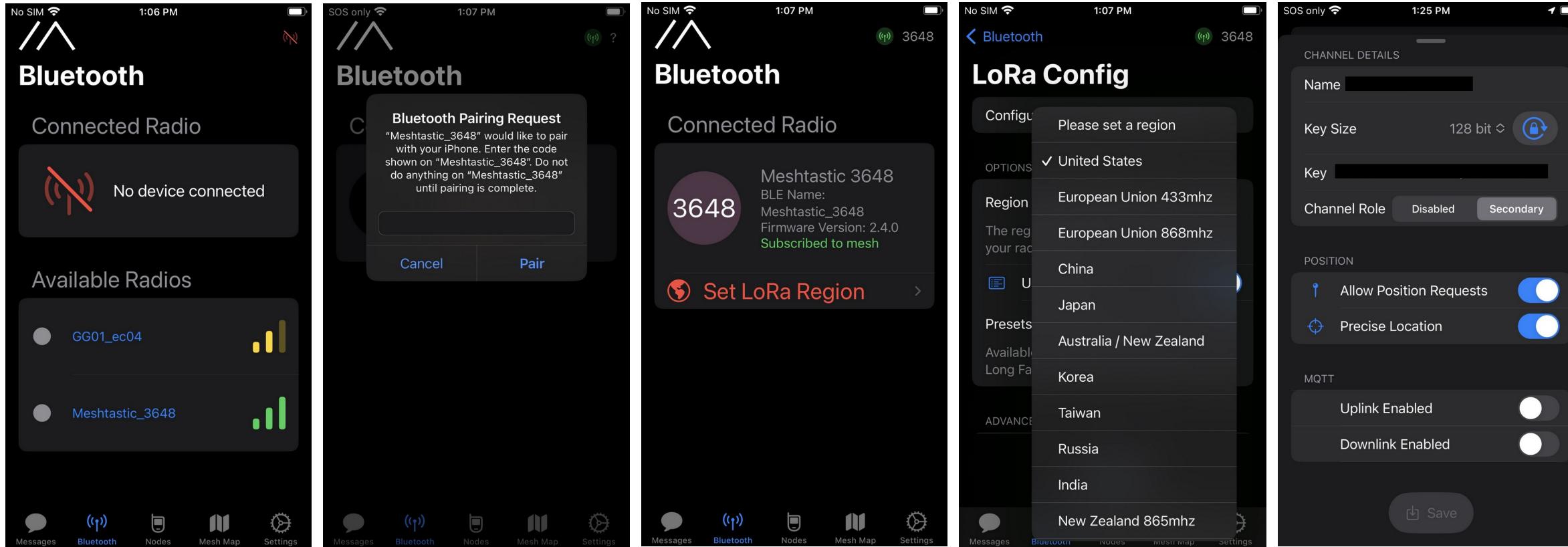


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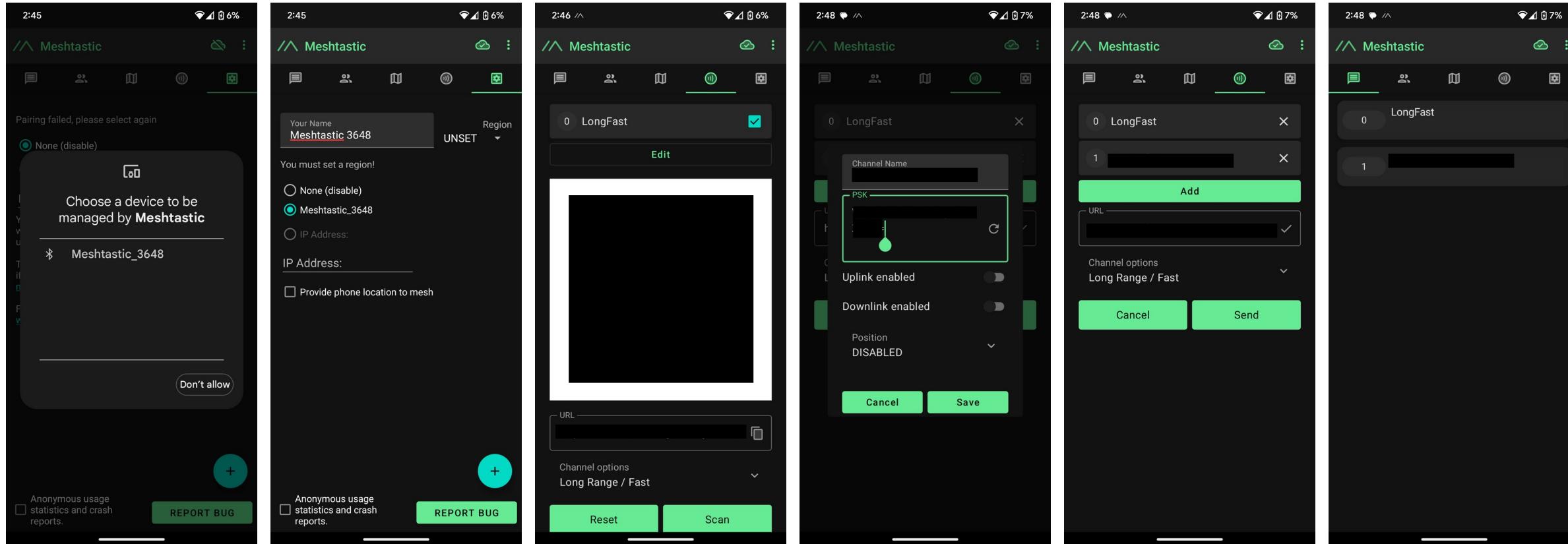
Setting Up Your Meshtastic Device: iPhone Software



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Setting Up Your Meshtastic Device: Android Software



Join Us On The Mesh!

BTC
Conference
Meshtastic
Channels

- 0 Primary Channel
- 1 B V Citadel
- 2 btc.chat
- 3 ecash.chat
- 4 p2p.market
- 5 /politics
- 6 events.news
- 7 nostr&npubs





Understanding Meshtastic Concepts: A Multi-Layer Approach

Naive Flooding for Multi-Hop Messaging

Reliable Zero Hop Messaging

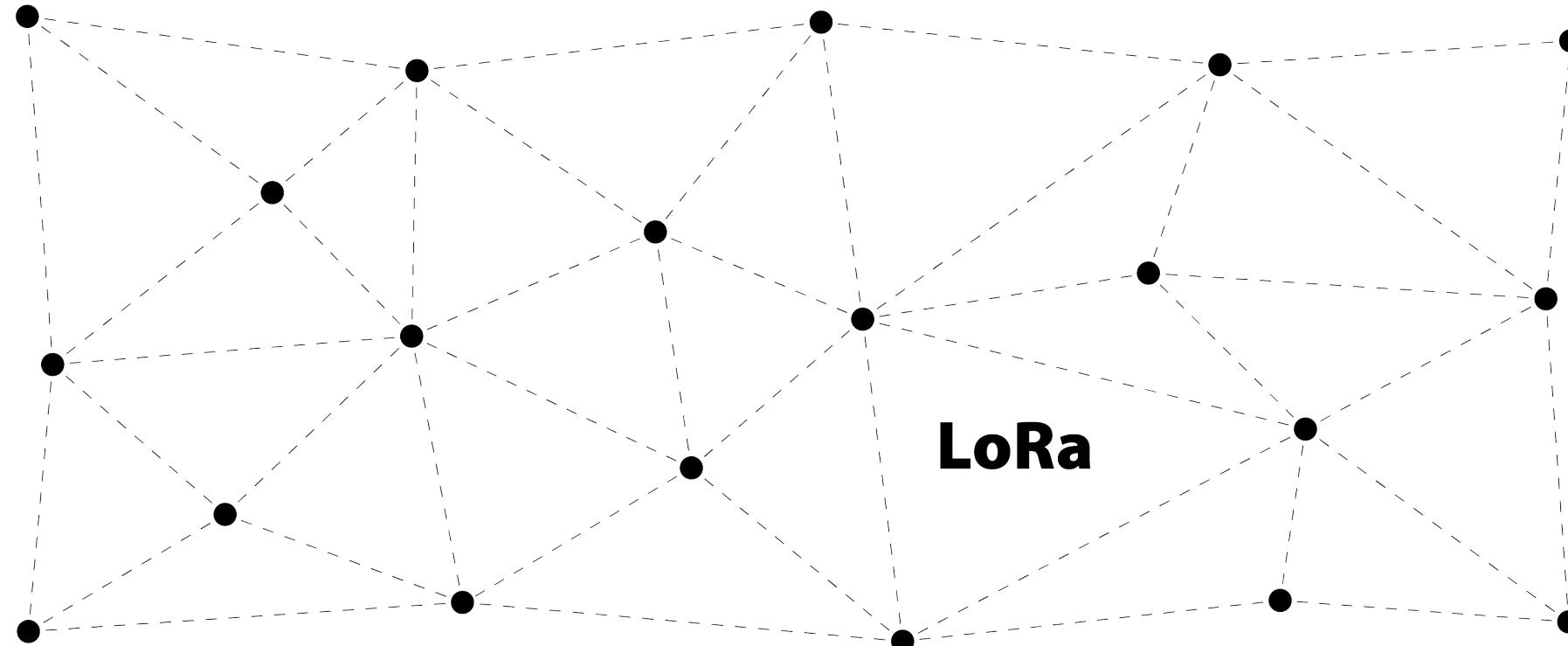
Unreliable Zero Hop Messaging

LoRa Radio

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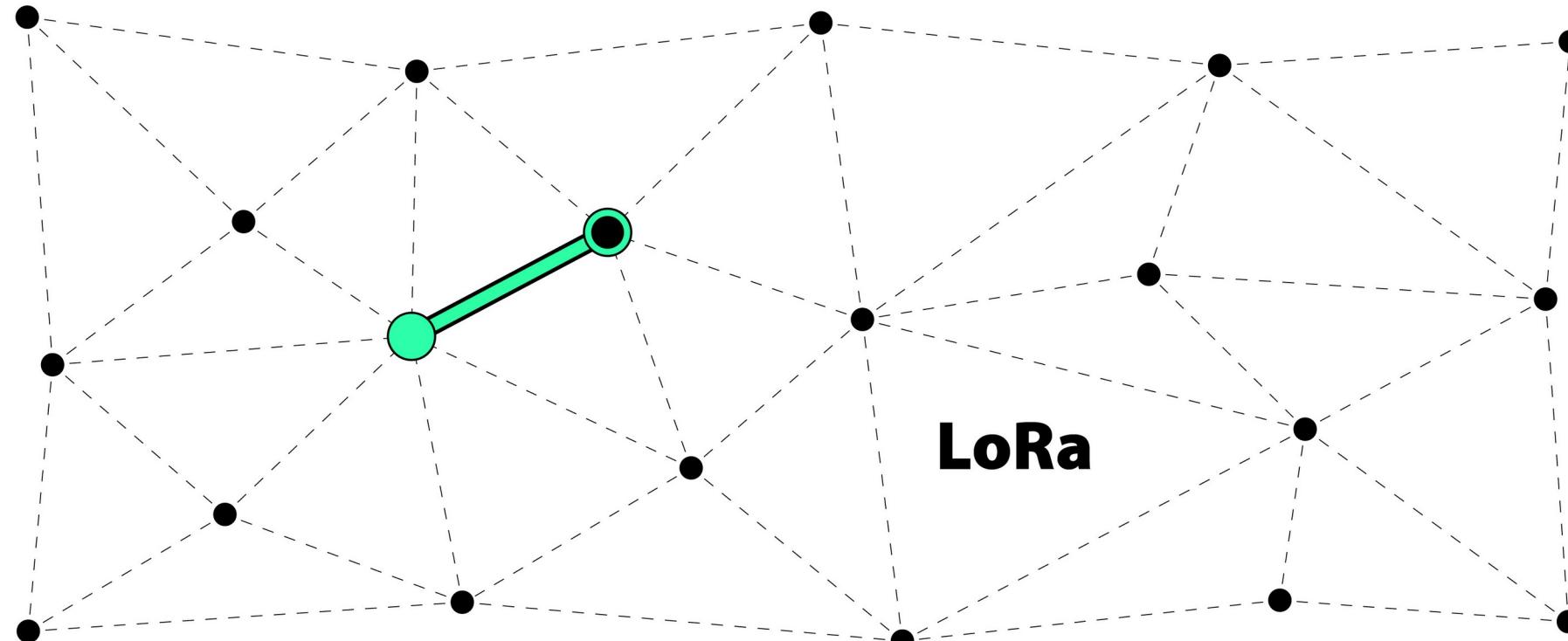
Layer 0: LoRa Radio - The Foundation of Meshtastic Communication



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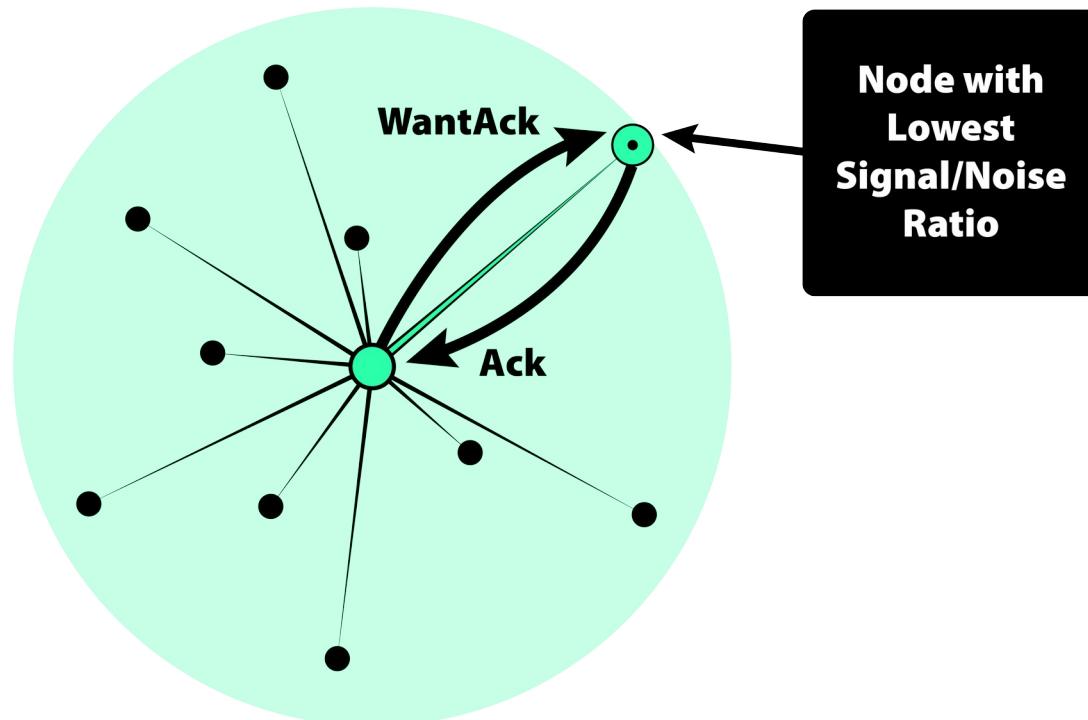
Layer 1: Unreliable Zero Hop Messaging - Conventional Packet Transmission



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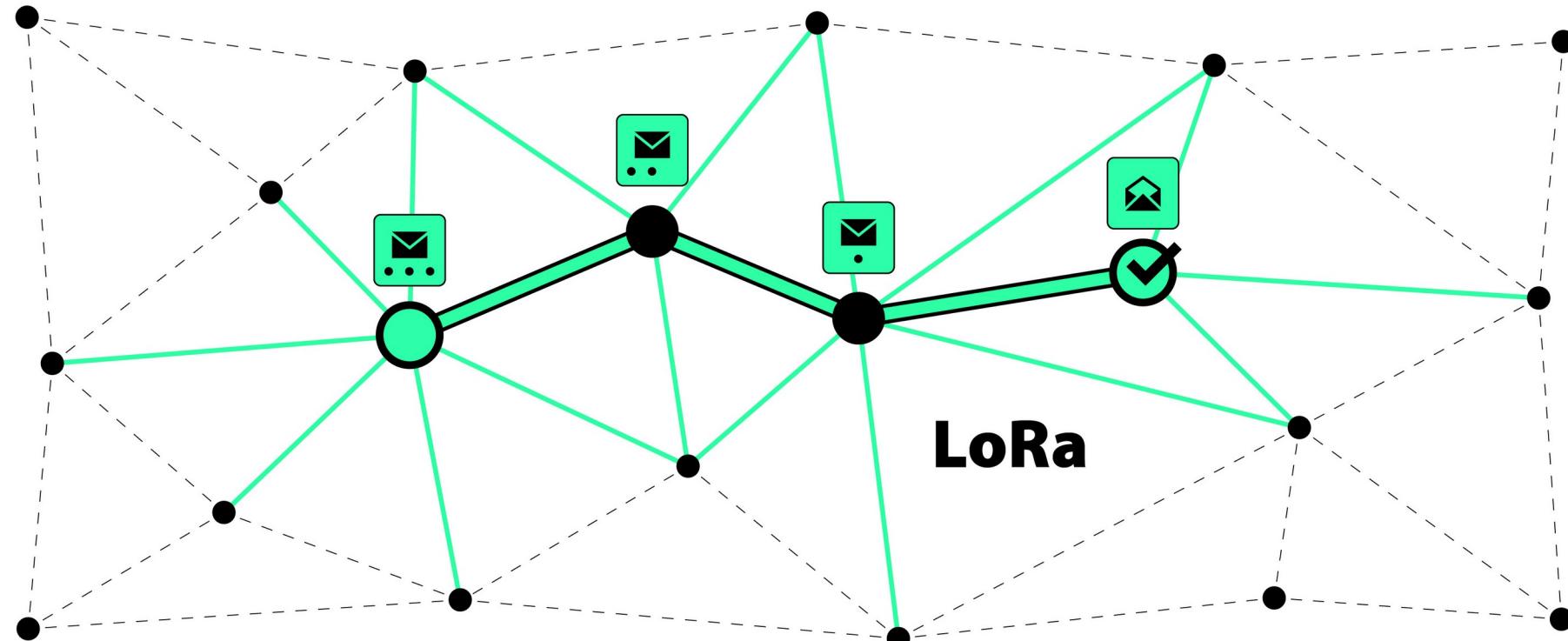
Layer 2: Reliable Zero Hop Messaging - Ensuring Message Delivery



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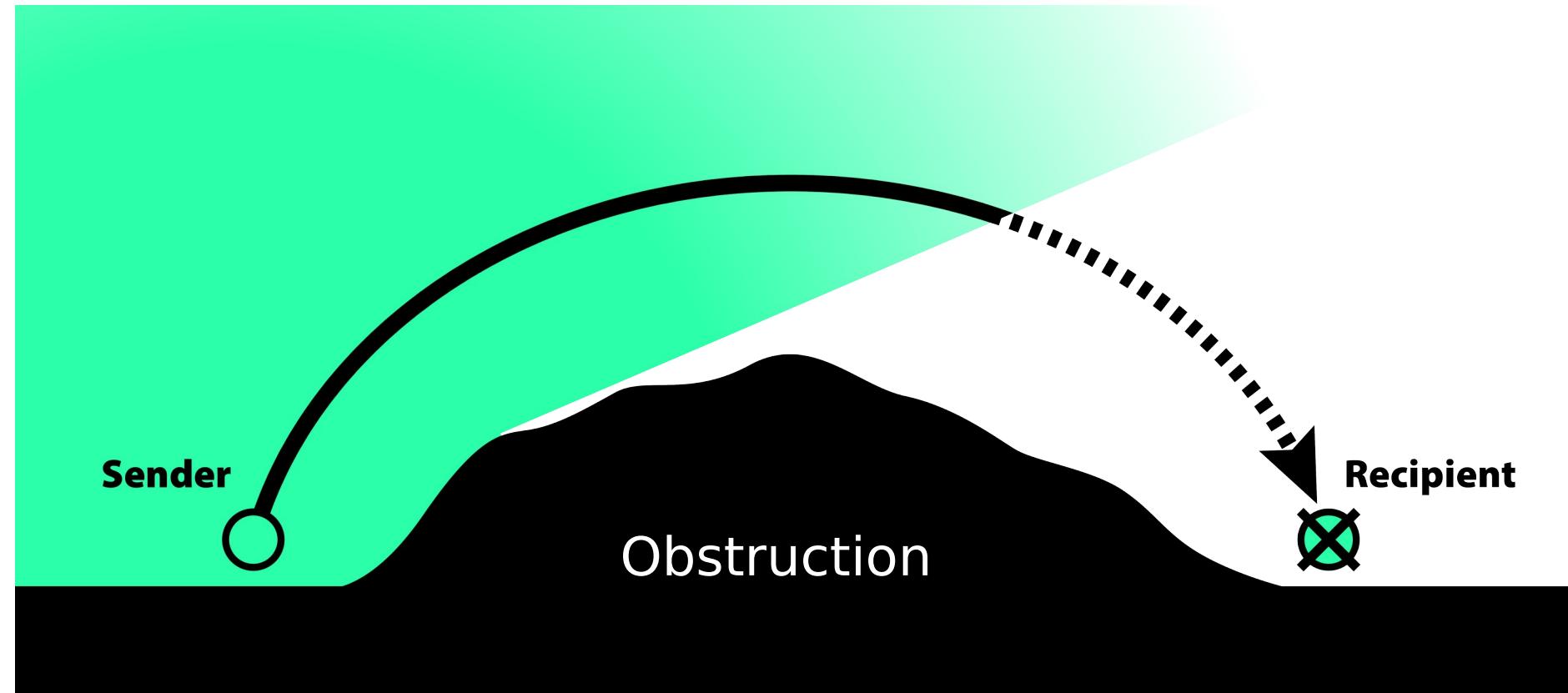
Layer 3: (Naive) Flooding for Multi-Hop Messaging - Extending Message Range



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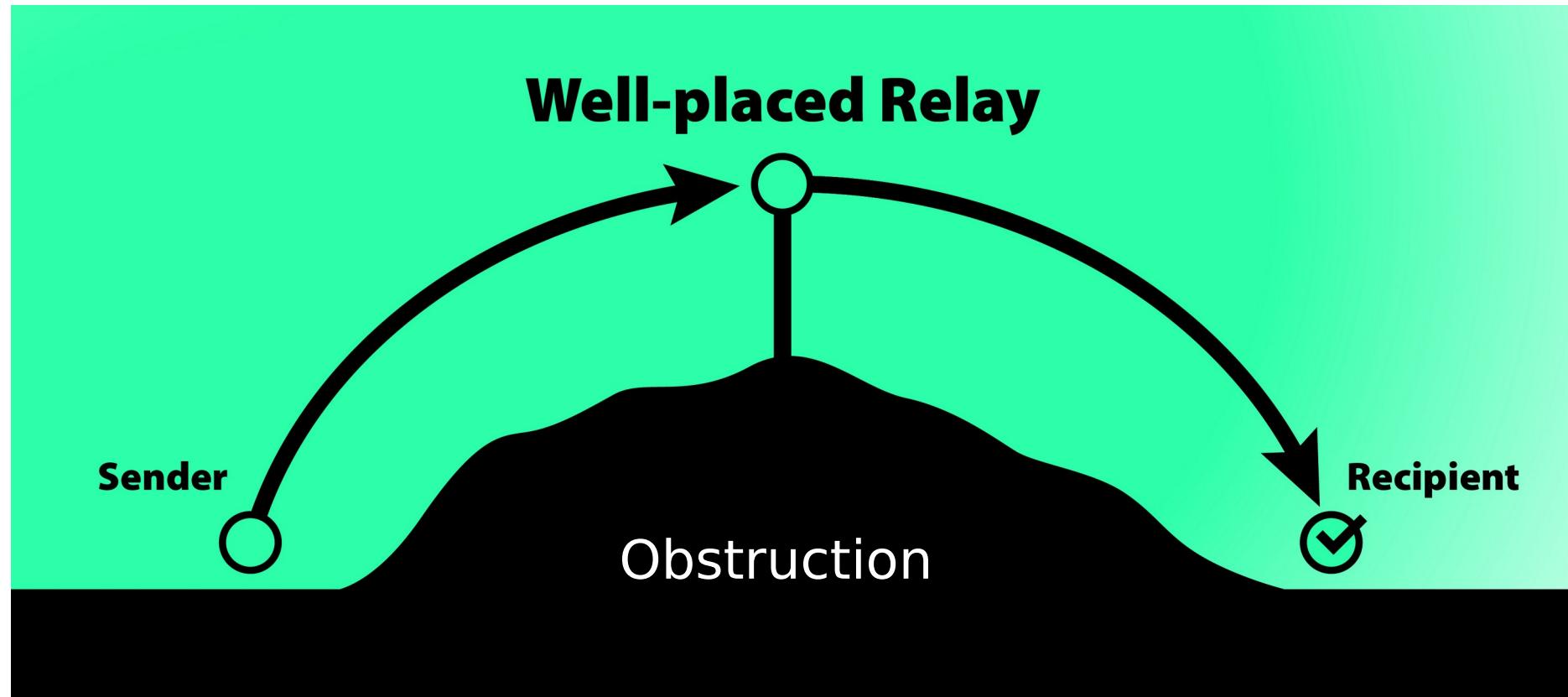
Optimizing Network and Landscape Topology for Reliable Coverage



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Optimizing Network and Landscape Topology for Reliable Coverage





Security Considerations for Meshtastic Users



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Practical Use Cases for Meshtastic and LoRa



Rural Area
Connectivity



Outdoor
Adventures



Disaster
Response



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Shout out to
The Comms Channel

https://www.youtube.com/@The_Comms_Channel



#artist #designer



Hi! I'm
Adam Malin

thePR0M3TH3AN

[npub15jnttpymeytm80hatjqcvhhqhzrx6gxp8pq0wn93rhnu8s9h9dsha32lx](https://nft BTC address)

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Key Takeaways

- Meshtastic and LoRa: Decentralized, off-grid chat app with phone and LoRa radio.
- Encryption: Uses encryption for secure messaging. Channel keys ensure privacy.
- Network Topology: Clear lines of sight and strategic placement of nodes enhance reliability.
- Practical Use Cases: Ideal for emergency communication, and community or mobile networks in remote areas.



/MESHTASTIC

Thank You!

BTC
Conference
Meshtastic
Channels

0 Primary Channel

1 B V Citadel

2 btc.chat

3 ecash.chat

4 p2p.market

5 /politics

6 events.news

7 nostr&npubs



Open Source
Presentation



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