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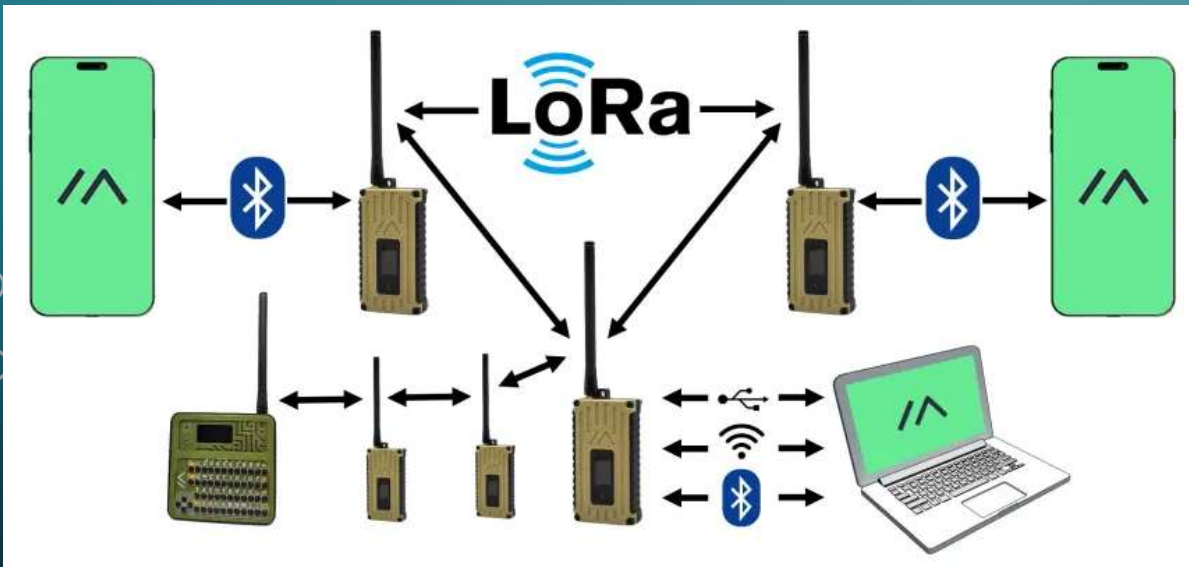


SHTF COMMUNICATIONS REALITY CHECK

- In real emergencies, complexity kills
- Stress exposes weak and hidden dependencies AKA the Bad App.
- Mesh texting must work for non-hams, and it must to be fast.



LoRa MESH is a self-organizing, decentralized network protocol that uses LoRa (Long Range) wireless technology to enable multi-hop communication between devices. Unlike traditional star networks, LoRa MESH forms a mesh topology, where each node can relay data for others, allowing messages to hop through multiple intermediate nodes to reach their destination.



**MeshCore just works
so much better than
Meshtastic 🤝**



WHY THIS CONVERSATION MATTERS

- Most mesh systems are built for hobbyists, not survival
- Preppers need predictable, decentralized comms
- Training time matters as much as RF performance

COMPATIBILITY



- MeshCore and Meshtastic are NOT natively compatible. A Meshtastic device cannot communicate directly with a MeshCore device in the same mesh network.

REPEATERS ON 915MHZ

Both MeshCore and Mestasic both operate on the License Free 915Mhz ISM Band.

- Yes,, 915 MHz is a Ham frequency



WHAT MESHTASTIC GETS RIGHT

- Wide hardware support
- Strong community and development
- Impressive feature set for experimentation



WHERE MESHTASTIC FAILS UNDER STRESS

- Too many modes and configuration states
- Unclear connection and delivery status
- Hard to explain to non-technical users

MESHTASTIC CENTRALIZATION

- MQTT servers and internet gateways
- Optional infrastructure becomes dependency
- False sense of resilience in grid-down scenarios

NOTE MQTT (Message Queuing Telemetry Transport) is a lightweight internet messaging system. Think of it as a central mailroom on the internet

- Devices publish messages to the server
 - Other devices subscribe to topics on that server
 - The server forwards messages between them
- The devices do not talk directly to each other — the server brokers everything.

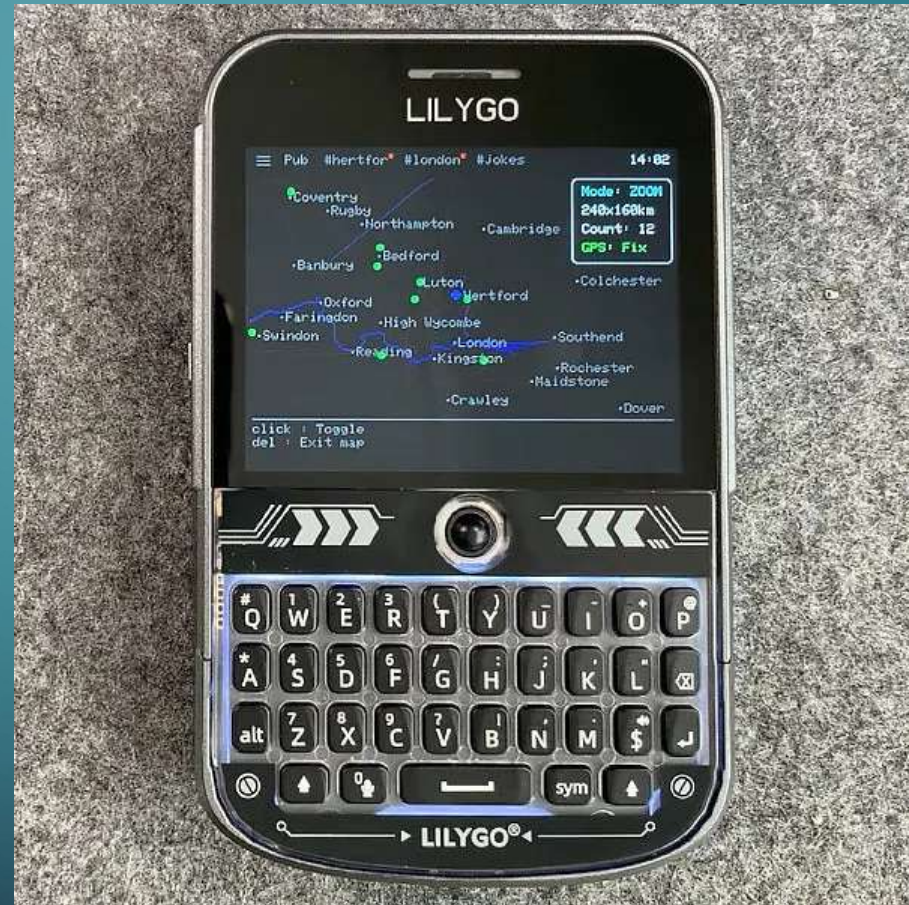
How MQTT is used in a Meshtastic network Meshtastic is primarily a radio mesh, but MQTT is an optional bridge that lets messages jump off the radio mesh and onto the internet.

MESHCORE DESIGN PHILOSOPHY

Built for emergency use first

Minimal states, obvious behavior

Decentralized by default — **no
servers**



MESHCORE: BUILT FOR THE REAL WORLD , SIMPLE AND STRAIGHT FORWARD.

- Power on and message — no setup maze (Like Cell phone Texting)
- Clear connection state at a glance
- Failure reasons are visible and understandable (You can see what is wrong, i.e. if your not connected, unlike Meshtastic, MeshCore provides feedback.



TRAINING OTHERS: 15-MINUTE RULE

- No mesh theory required
- Users learn by doing, not configuring
- Works like an appliance, not a project.



PREDICTABLE MESSAGE DELIVERY

- Clear indicators: sent, relayed, failed
- No mystery paths through cloud services
- You know why a message didn't go through



going on that's pretty useful

MESHCORE VS MESHTASTIC

- Meshtastic: Feature-rich, complex, phone-centric
- MeshCore: Focused, simple, emergency-first
- Different tools for different missions
- **MeshCore is Fast !!!!**



WHEN MESHTASTIC MAKES SENSE

- Experimentation and tinkering
- Long-term network projects
- Users who enjoy deep configuration



WHY MESHCORE WINS FOR SHTF

- Trustworthy under stress (it just works)
- Easy to train family and neighbors
- Decentralized, predictable, survivable





Feature

Setup

System State

Infrastructure

Training Time

Failure Feedback

Meshtastic

Multiple roles & settings

Unclear modes

MQTT & gateways creep in

Hours or days

“Why did it fail?”

MeshCore

Power on and message

Obvious connected / not

No servers, no gateways

15 minutes

Clear reason shown



ROUTING & NETWORK DESIGN:

- **Meshtastic:** Uses managed flooding for broadcast messages and next-hop routing for direct messages (since v2.6). Nodes dynamically rebroadcast, making it ideal for ad-hoc, mobile networks (e.g., hiking, events).
- **MeshCore:** Uses flood-then-direct routing with dedicated repeaters handling forwarding. Companions (user devices) do not rebroadcast, reducing airtime and congestion. Optimized for fixed, scalable infrastructure (e.g., city-wide networks, emergency response).

HOP LIMITS

- **Meshtastic:**

Default max 3 hops, configurable up to 7.

- **MeshCore:**

Configurable up to 64 hops, enabling long-range, multi-hop communication across large areas.

AIRTIME & EFFICIENCY

- **Meshtastic:**

Higher background traffic due to frequent telemetry and flooding, especially in dense networks.

- **MeshCore:**

Minimal default telemetry; uses a "pull" model and narrower radio presets (62.5 kHz), improving SNR and airtime efficiency.

DEVICE ROLES:

- Meshtastic:

Dynamic roles (CLIENT, ROUTER, SENSOR, etc.) can be changed via app.

- MeshCore:

Fixed roles at flash time: Companion (user device), Repeater (infrastructure), and Room Server (central hub).

MESSAGE RELIABILITY:

- **Meshtastic:**

No built-in delivery confirmation (Not Good), messages may be lost due to collisions or hop limits.

- **MeshCore:**

Confirms delivery or failure and uses intelligent path learning, making it more reliable in dense or complex environments.

Choose Meshtastic IF:

- You need easy, plug-and-play communication for temporary, mobile groups (e.g., camping, festivals).
- You want GPS tracking, telemetry, MQTT integration, or ATAK support.
- You're in a highly dynamic environment with moving nodes.

CHOOSE MESHCORE IF

- You're building a permanent, city-scale mesh network with fixed repeaters.
- You prioritize reliable, low-latency messaging and network stability.
- You're focused on emergency response, IoT integration, or structured deployments.

COMMUNITY & ECOSYSTEM

- **Meshtastic:**

Larger, more established community with broader hardware support and integrations.

- **MeshCore:**

Smaller, newer community, but praised for stable firmware, cleaner app experience, and superior routing.

SUMMARY

- **Meshtastic:**

Best for fun, i.e. experimentation, mobile, ad-hoc communication.

- **MeshCore:** Best for mission critical, scalable, infrastructure-backed networks.

- **NOTE:** As of 2025–2026, Austin (TX) Mesh and other large-scale projects are shifting toward MeshCore for citywide reliability and efficiency.

QUESTIONS???????

Thank You

