Growing Your Community

- Finding Volunteers and Repeater Sites
- Using RegionMesh Geographic Scoping
- Onboarding New Members Effectively
- Community Events and Meetups

Finding Volunteers and Repeater Sites

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The practical limit on any mesh network's coverage is the number and location of repeaters. Growing a community mesh means finding both people willing to host hardware and locations with good RF exposure.

Identifying Good Repeater Sites

The best repeater sites share these characteristics:

- **Elevation:** Hilltops, building rooftops, water towers - any location that has line-of-sight to a wide area
- **Permanent power:** AC power or solar with battery backup means no maintenance visits for power
- **Internet connectivity:** Enables MQTT gateway functionality and remote management
- **Willing host:** Someone at the location who can assist with initial install and occasional physical access

Where to Find Volunteers

- **Amateur radio clubs:** Many hams are already interested in digital modes and emergency communications; LoRa mesh is a natural extension
- **Community preparedness groups:** CERT, neighborhood emergency response teams, and ARES/RACES members often see immediate value in mesh
- **Tech and maker communities:** Hackerspaces, makerspaces, and local tech meetups
- **Community maps:** Public maps such as meshmap.net (Meshtastic, opt-in MQTT-reporting nodes only) and map.meshcore.io (MeshCore) can help you spot existing operators nearby — though they show only nodes that uplink, so they undercount private networks

- **Existing mesh Discord servers:** The official MeshCore Discord at meshcore.gg, RegionMesh's community channels, and other communities often have "looking for volunteers in [state]" discussions

The Repeater Volunteer Pitch

The cost and effort for a volunteer are minimal. Emphasize:

- Hardware cost: ~$32 for a single Heltec V3 (less in multipacks); a basic repeater build with antenna and enclosure runs somewhat more (as of June 2026)
- Power draw: under 1 watt continuous (negligible electricity cost)
- Maintenance: essentially zero once installed and configured
- Contribution: one well-placed rooftop repeater can meaningfully extend neighborhood coverage, depending on terrain, antenna height, and line of sight

Coordinating Through the Community

If you are deploying as part of a regional MeshCore network like RegionMesh, coordinate through the official MeshCore Discord at meshcore.gg and the regionmesh.com community resources. There is no single official "5-step RegionMesh process"; practices vary by community and are set by local consensus. Sharing your repeater's location and settings with nearby operators helps the broader community find and route through it.

Tracking Your Network

As you grow, keep a simple inventory of deployed nodes: location, hardware, firmware version, radio settings, and host contact. This becomes critical for maintenance, upgrades, and troubleshooting.

Using RegionMesh Geographic Scoping

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RegionMesh is a third-party community naming convention for **MeshCore** (not Meshtastic), built around MeshCore's region/scope feature. It is documented at the community site regionmesh.com and is *not* an official MeshCore registry or a single operated national mesh. As participating communities grow, using a shared region name helps you manage channel capacity and create region-specific communications without flooding every reachable repeater.

A MeshCore "region" is simply an **arbitrary, operator-chosen plain-text name** (lowercase alphanumeric plus hyphens, maximum ~29 bytes UTF-8) that the firmware **SHA-256-hashes into a 2-byte transport code**. There is **no ISO 3166-2 system, no built-in country/state code table, and no central firmware registry**. A name like `us` or `nd` works only because it is a valid arbitrary string the firmware hashes — the firmware never interprets it as a standardized region code. RegionMesh is a convention for getting nearby operators to agree on the same names, adopted by local consensus rather than registered with any authority.

The Problem Scoping Solves

Within a connected MeshCore mesh, every message without a scope floods all repeaters it can reach. That flood is bounded by RF range and hop limit (and by MQTT bridging where enabled) — it does not literally travel coast-to-coast over the air, because LoRa nodes only relay within radio range. But on a dense local network, or across MQTT-bridged segments, unscoped traffic consumes channel capacity that nearby communities do not need to carry. A neighborhood alert in Fargo, ND does not need to be relayed by repeaters that only serve other metros.

How to Enable Regional Scoping

On each repeater, configure the relevant regions using the **MeshCore CLI** (these are MeshCore commands, not Meshtastic). A child region requires its parent as an argument, and you allow flood

forwarding for each name before saving. Verify exact syntax against docs.meshcore.io and regionmesh.com, as the CLI evolves:

```
region put us
region put nd us
region allowf us
region allowf nd
region save
```

This example configures a North Dakota repeater to carry both national `us` traffic and a North Dakota-scoped `nd` region. The `region put nd us` form establishes `nd` as a child of `us`; the parent argument is required for the hierarchy to take effect. There is no `advert` step in this flow.

Creating a Regional Channel

When messages are scoped to your region (e.g., `nd`), they are only forwarded by repeaters that have that region configured. This creates an effective regional "channel" over shared infrastructure without requiring separate hardware or frequencies.

Choosing a Metro Code

If your community covers a metro area not well served by a state name alone (e.g., Dallas/Fort Worth), you can propose a community metro name. There is no central registry — codes are adopted by local consensus. A typical approach:

1. Join the official MeshCore Discord at meshcore.gg (where much RegionMesh coordination happens), or check regionmesh.com
2. Propose the name in the appropriate channel (format: lowercase alphanumeric and hyphens only, max 29 bytes UTF-8, e.g., `dfw`)
3. Achieve consensus among local mesh operators
4. The name is then documented and shared so nearby operators adopt the same one — there is no formal registration step

Existing Metro Codes

RegionMesh's documented metro names are bare strings with no `us-` prefix. Examples (confirm the current list at regionmesh.com rather than assuming):

- `dfw` - Dallas/Fort Worth
- `bay-area` - San Francisco Bay Area
- `greater-atlanta` - Greater Atlanta

See regionmesh.com or the official MeshCore Discord for the current complete list.

Onboarding New Members Effectively

Your onboarding process determines whether new members stay active or quietly disappear after their first week. A smooth, welcoming, and technically successful first experience converts curious newcomers into committed network participants.

The Onboarding Journey

1. **Discovery** - They learn the network exists
2. **Acquisition** - They obtain hardware
3. **Configuration** - They get the node on the network
4. **First contact** - They exchange messages with another member
5. **Deeper engagement** - They explore features, attend events, consider contributing infrastructure

Hardware Recommendations

Standardize on 1-2 recommended hardware options. Prices below are approximate single-unit retail as of mid-2026 and vary by retailer and region. Current recommended starter kit:

- **Budget option:** Heltec WiFi LoRa 32 V3 (~$32 single-unit; sub-$20 only in bulk/multipacks) - USB-C, built-in OLED, no GPS. Good for indoor/desktop use.
- **All-in-one option:** LILYGO T-Beam (roughly $30-45 depending on retailer/region) - GPS built in, battery connector, excellent for portable use
- **Premium:** RAK WisBlock Starter Kit (~$60-80, depending on bundled modules) - Modular, excellent build quality, best for fixed outdoor installations

Pre-Configured Firmware Distribution

- Create a saved configuration file with your community channel key, frequency preset, and node naming convention pre-filled
- Host it on your community wiki or website
- Flash firmware at flasher.meshtastic.org, then share your channel settings separately via a Meshtastic channel QR code or URL (meshtastic.org/e/#...). The web flasher loads firmware onto the device; it does not bake your channel config into the firmware link - that is a separate step.
- Document: "Flash this firmware, scan this channel QR code, done." - Two steps maximum.

First-Week Checklist for New Members

- Node powered on and flashed with community firmware
- Channel key loaded (via QR code scan or manual entry)
- Node name set to community naming convention
- Sent a test message received by at least one other member
- Joined community Discord/Signal channel
- Node visible on your community map (note: a node only appears on meshmap.net if MQTT uplink is enabled, which private community channels usually keep off - so absence from meshmap.net is not a failure)

Assign a "buddy" - an experienced member who agrees to be on-call for a new member's first week. A quick DM check-in on day 3 dramatically improves retention.

Managing Stale and Orphaned Nodes

Every network accumulates abandoned nodes - nodes still visible on the map but owned by someone who has moved on. Management strategies:

- **Annual "node census"** - Message all known node operators, ask for a check-in. Non-responders after 30 days are marked as inactive.
- **Last-heard tracking** - Meshtastic shows a "last heard" timestamp per node in the app. Some community map tools then style nodes not heard in 30+ days differently; that styling is a property of the map software, not the Meshtastic firmware itself.
- **Node decommission policy** - Backbone/shared infrastructure nodes require formal handoff if an operator leaves. Document the process.

Community Events and Meetups

Regular events keep the community engaged and accelerate network growth. Events serve three purposes: recruitment of new members, skill-sharing among existing members, and public demonstration of the network's value.

Build Nights

Monthly hands-on sessions where newcomers build their first node with help from experienced members. Format that works:

- **Venue:** Makerspace, library meeting room, or restaurant private room. 2-3 hours.
- **Format:** 15 min intro presentation → 90 min guided build → 15 min test on the live mesh
- **Materials:** Pre-order 4-6 extra kits to sell at cost to walk-ins. Keep spare USB cables, soldering irons, and spare antennas on hand.
- **Cost to participants:** Hardware cost only - roughly $30-50 for a single-unit entry node depending on the board (see the Onboarding page for current single-unit hardware pricing). Experienced helpers volunteer their time.

Document and promote the event on social media. "Before and after" photos of someone building their first node and seeing it appear on the map are highly shareable.

Annual Range Test

A fun event where participants drive, hike, or bike to test the limits of the network. Structure:

1. Designate a base station at a high-elevation location
2. Participants spread out across the coverage area with mobile nodes
3. Track who can communicate from the farthest point
4. Record SNR/RSSI at each test location
5. Share results in a coverage report - excellent content for your community map

The range test also generates real coverage data that helps you identify gaps for future backbone expansion.

Tabletop Exercises

Simulate a disaster scenario where the mesh is used as a coordination tool. Good exercise scenarios:

- **Extended power outage** - Cell networks are down, no internet. How does the community coordinate? Objective: verify which of your own repeaters actually stay up during the outage (battery/solar reserve) - a mesh is only available in a grid-down event if its infrastructure nodes have independent power.
- **Evacuation coordination** - Simulated wildfire. Use the mesh to coordinate shelter-in-place vs. evacuation by zone.
- **Search and rescue** - Member is "lost" in a park. Use the mesh to coordinate the search team.

Tabletop exercises reveal gaps - in coverage, in procedure, and in member skills - before they matter. Document findings and publish improvements.

Meetup Frequency Guidelines

Event Type	Frequency	Time Investment
Build night / intro session	Monthly	3-4 hrs to organize, 2-3 hrs to run
Infrastructure work party	Quarterly	Full day
Annual range test	Annually	Weekend event
Tabletop exercise	Annually (before storm season)	Half day
Virtual sync call	Monthly	1 hr