

SignalReach

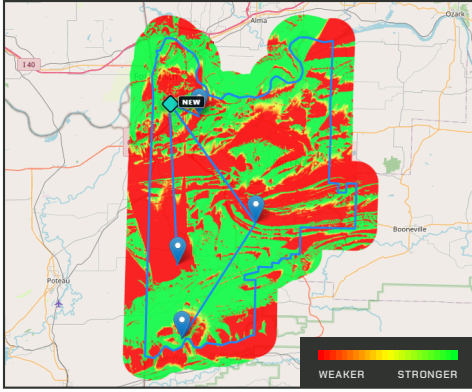
Your area of interest in. A deployable network plan out.

Terrain-aware RF network planning from AT Labs, part of the Response Crate software suite.

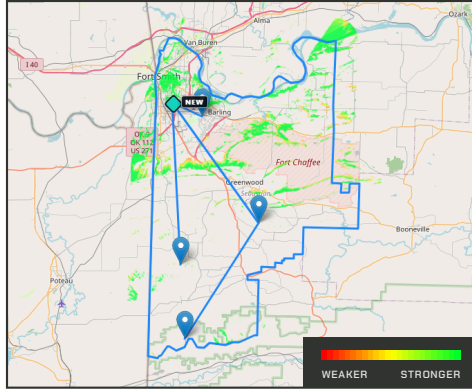


Example baseline study

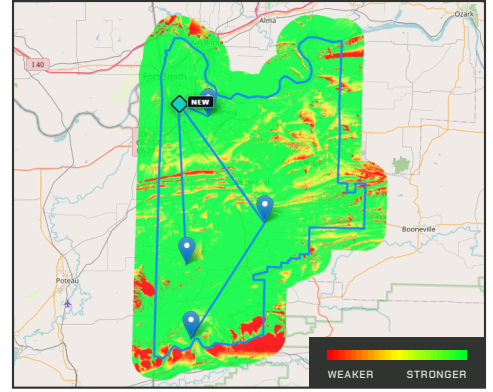
County EMA. Generic 10 m heights; final plans use surveyed tower data. Base map © OpenStreetMap contributors.



1 One existing site, on its own
Absolute coverage from a single tower.



2 What the added site contributes
New area gained from one deployable RM-2.



3 The full network
Fade margin across the area of interest.

4 existing towers modeled

80%+

county coverage from those towers

1 site added to close backhaul

At generic 10 m heights, backhaul between the four towers did not close. An open run of up to 10 added radios placed one site to complete it.

1 Define the mission

Load the area of interest, set a coverage target, mark must-cover areas and no-go zones.

2 Add real constraints

Enter existing towers, available radios, antenna heights, and a site limit.

3 Analyze and optimize

Models terrain and propagation. Stops adding sites once the objective is met.

4 Review and export

Inspect heatmaps, per-site layers, and backhaul paths. Export KML and PNG.

What it answers

- Coverage**
Do your existing towers cover enough of the mission area? Where are the gaps?
- Added sites**
How many more sites does the mission need, and where do they go?
- Backhaul**
Can every site reach the rest of the network?
- Equipment**
Which of your radios belongs at each site, and what does each site add?

Supports configurable RF systems and AT Labs planning profiles for selected mesh, LoRa, HaLow, and Wi-Fi technologies.

Deliverables

- Map layers**
KML for recommended sites, backhaul paths, and coverage overlays.
- Heatmaps**
Coverage, fade-margin, and per-site layers, plus run metrics and an audit trail.
- Portability**
Portable KML and image-based map products for common geospatial workflows, including Google Earth and TAK-style layers.

Services

- AOI coverage and deployment studies**
Studies for your area of interest at low, medium, or high resolution.
- Custom RF and mesh planning**
Studies built around your radios and sites. Airborne UAS nodes can be included with flight profiles.
- Deployment planning**
Site-by-site plans your team can take to the field.
- User training**
Your planners learn to run SignalReach studies.
- Licensing and support**
SignalReach software licensing with support.



Send us your AOI. AT Labs returns a deployable plan.

Scoped and quoted per engagement. Contact us to scope a study.

sales@constellationresponse.com

AT Labs hardware and software designed and built in Tennessee by Kenny Cornett · Offered through Constellation Response
Modeled results support planning and engineering decisions; final performance remains subject to field conditions and installation quality.