RANGE TESTING AND EMERGENCY APIS

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PROJECT OVERVIEW

We built APIs that use a user's location to find nearby wildfire and power outage information. The APIs are being developed as part of a wireless emergency communications network, with the goal of making important information available even when normal communication systems are limited.

API RESULTS

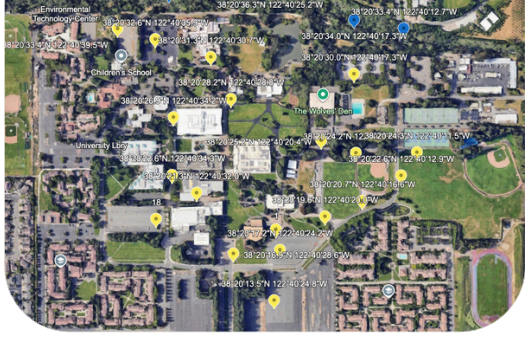
Outputs:

- Fire name
- Acres burned
- Percent containment
- Power outage company
- People affected
- Planned or unplanned
- Estimated restoration time

Data Sources:

- Cal OES — emergency and incident information
- NIFC — wildfire information
- OpenStreetMap — geographic and location data

RANGE TESTING



WIRELESS EMERGENCY COMMUNICATIONS NETWORK

The wildfire and power outage APIs are part of a larger wireless emergency communications project. The network is intended to move useful information to users when traditional infrastructure is unavailable, damaged, or overloaded.

PURPOSE OF RANGE TESTING

The range testing supports a separate system designed to count pedestrians along a defined path at Sonoma State University.

NODE RANGE TESTING DATA POINTS

- Latitude and longitude coordinates
- Distance (in feet and meters) from Radio #1
- Private and public channel RSSI values
- Qualitative location description

NEXT STEPS Add more data sources • Improve reliability during outages • Test the network in the field • Refine node placement • Develop a user-facing interface