



CUSTOMER
SUCCESS STORIES





INDUSTRIAL MANUFACTURING



OIL & GAS REFINERY

Houston, TX

INITIAL APPLICATION

- Connect IoT sensors in hazardous environments wirelessly to improve production environment control
- Connect vehicles for logistics and automation
- Flexibility and mobility

BACKGROUND, CHALLENGES & PRIVATE CELLULAR MESH DRIVERS

Extend the cellular network coverage into the metal and concrete structures.

- Outdoor radio units only provide network coverage on the periphery of these structures
- No wired backhaul available inside the structures
- Coverage holes indoors in the industrial and in carpeted area
- No coverage inside the concrete structures like lab, offices etc



EXAMPLE: COVERAGE IMPROVEMENT WITH GXC NODE

Houston, TX

APPLICATION

Oil and Gas refinery

USE CASE

Connecting C1D2 sensors, tablets, IoT devices

SPECTRUM

US CBRS

RADIOS

GXC Mesh Node + CBRS APs

EDGE CLOUD

Onyx Edge

MANAGEMENT

Onyx Portal

SOLUTION

Mesh nodes improved coverage in a central area without requiring additional fiber/backhaul installation



EXISTING RAN WITH FIBER



AFTER ADDING GXC MESH NODE



VENUES



UNIVERSITY CAMPUS CONNECTIVITY

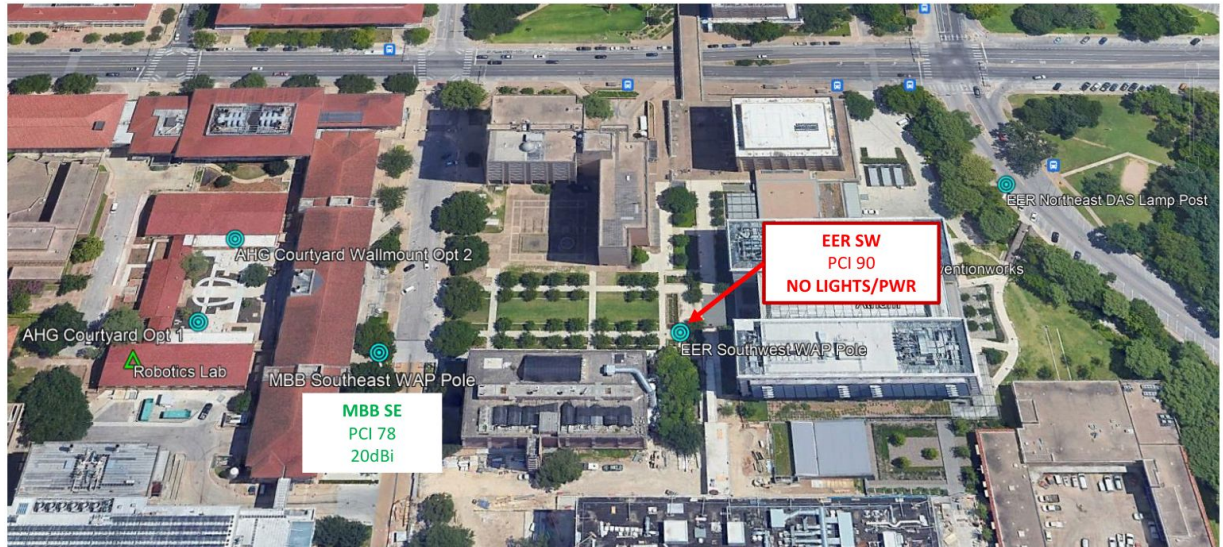
Austin, TX

INITIAL APPLICATION

- Provide indoor and outdoor coverage to multiple robotics research teams
- Low latency low jitter communication system for Image and Lidar transmissions

BACKGROUND/CHALLENGES AND PRIVATE CELLULAR DRIVER

- University WiFi not sufficient to provide seamless coverage indoors and outdoors
- High jitter with WiFi limits the performance of the robotic systems
- Isolated network for specific application



UNIVERSITY CAMPUS CONNECTIVITY

Austin, TX

APPLICATION

Robotics

USE CASE

Connecting campus researchers and devices

SPECTRUM

US CBRS

RADIOS

GXC CBRS APs

EDGE CLOUD

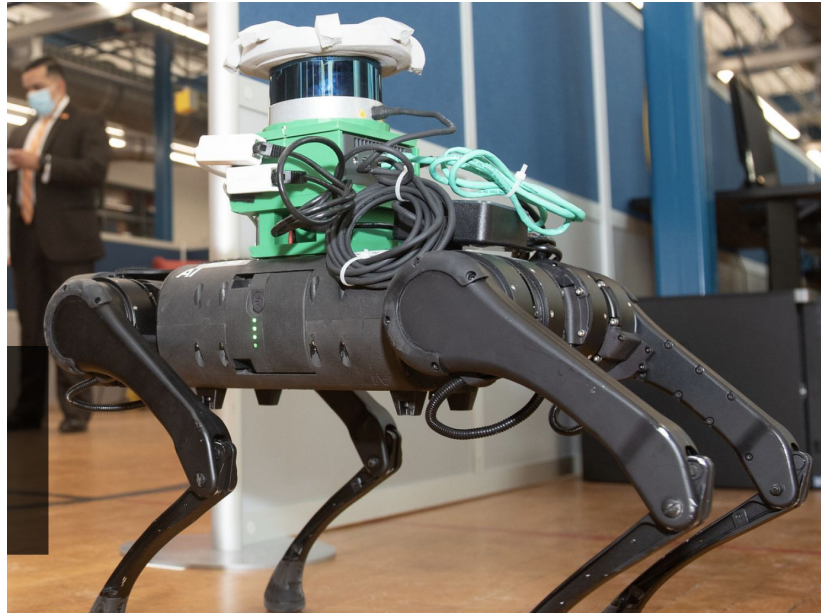
Onyx Edge

MANAGEMENT

Onyx Portal

SOLUTION

Improved reliable coverage across the campus for robots to connect



RV PARK

Brenham, TX

INITIAL APPLICATION

- Park wide CBRS and WiFi coverage
- Connectivity inside the RVs
- Hotspot devices for heavy data users - work from anywhere

BACKGROUND, CHALLENGES & PRIVATE CELLULAR DRIVERS

- Poor WiFi options for outdoor
- Coverage challenges inside the RVs
- Extending cellular coverage beyond public cellular network



SOLUTION

Brenham, TX

APPLICATION

Internet connectivity

USE CASE

Connecting park users devices to internet

SPECTRUM

US CBRS

RADIOS

GXC CBRS APs

EDGE CLOUD

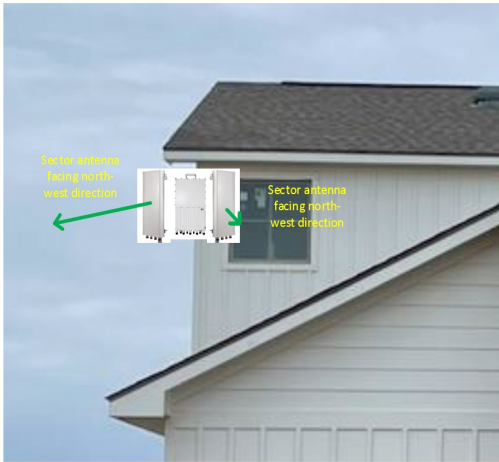
Onyx Edge

MANAGEMENT

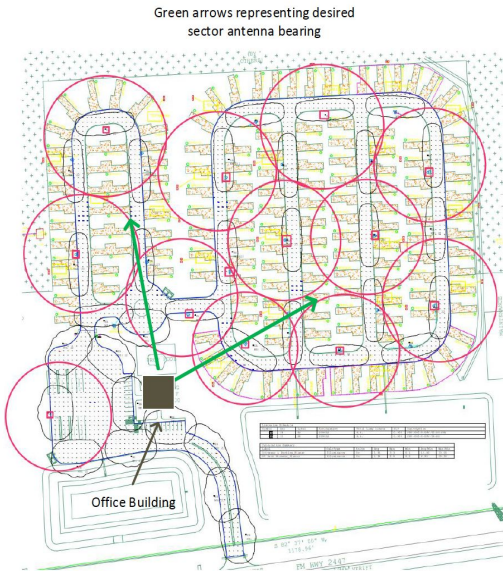
Onyx Portal

SOLUTION

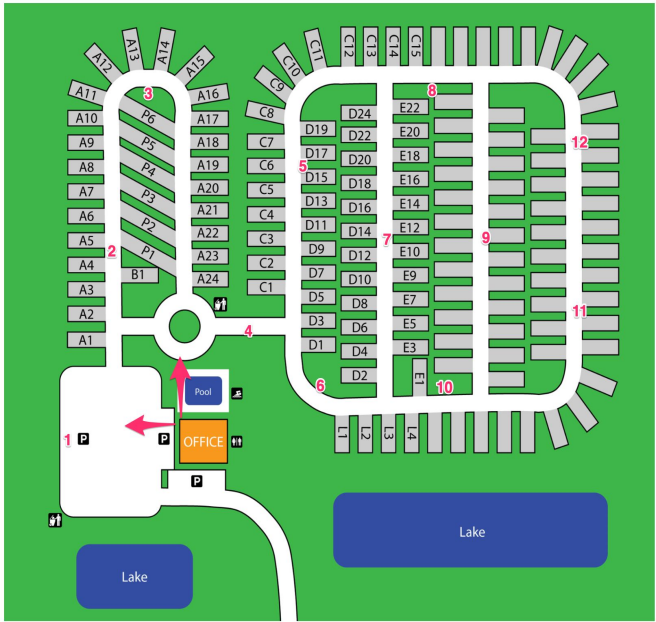
Improved reliable coverage across the park that enables internet access and data connectivity



Simulated GXC Node and antenna location



GXC | 10000 Metric Blvd., Suite 200, Austin, TX 78758



	Data Usage in Mb	
	Last 1 week	Last 1 month
Pole 1	2248	12259
Pole 2	141523	688210
Pole 3	145776	757210
Pole 4	30292.25	52972.46
Pole 5	66405.35	198411.32
Pole 6	248327.95	823999.42
Pole 7	69607.91	135026.39
Pole 8	67805.04	176687.23
Pole 9	9747.44	14963.15
Total Usage (GB)	763.4110254	2792.713643





SMART AGRICULTURE



GRANDFARM

Fargo, North Dakota

INITIAL APPLICATION

Emerging Prairie Ecosystem

- Grand Farm
- Emerging Digital Academy
- Grand Sky
- Vantis UAS (UAS/BVLOS)
- North Dakota State University
- Plug & Play AgTech Practice

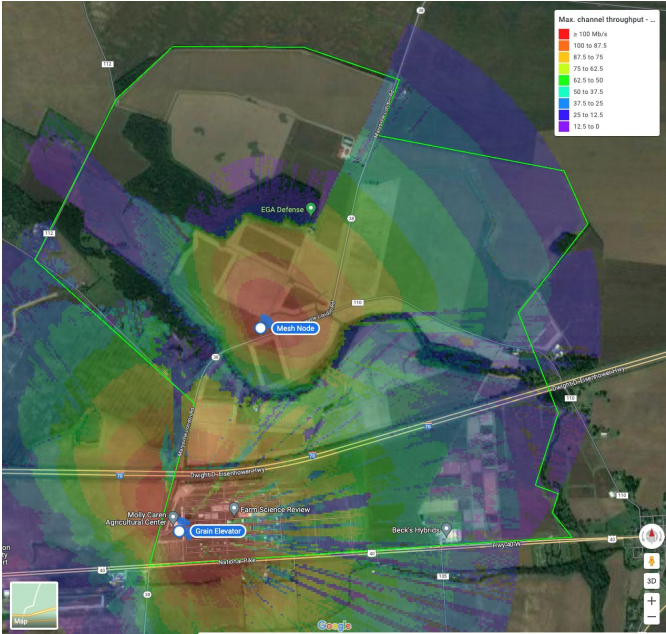
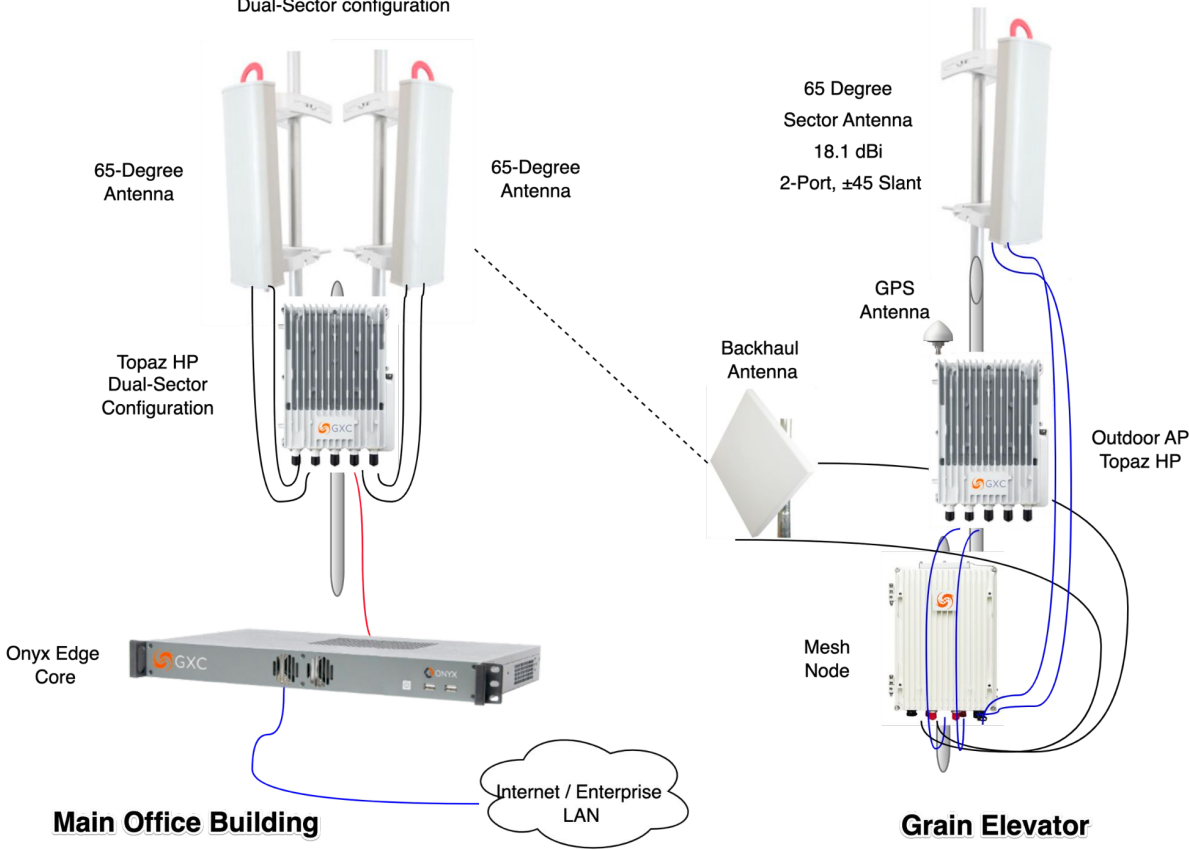
PUBLIC/PRIVATE/ACADEMIC INITIATIVE

- Technology Providers – Microsoft etc.
- Ag Industry – CHS; John Deere; Bobcat etc.
- State, Local Fed government
- 250 Precision Ag Experiments underway



Connected Farm

Dual-Sector configuration





URBAN ENTERPRISE NETWORKS



URBAN DECENTRALIZED WIRELESS NETWORK

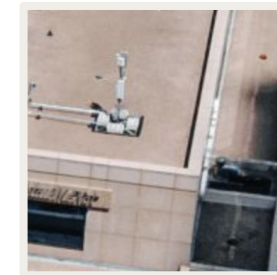
Austin, TX

INITIAL APPLICATION

- Seed network for decentralized wireless connectivity

SOLUTION

- GXC Onyx deployed in downtown austin to provide connectivity to users and businesses in the area



Outdoor Access Point