

Subterranean Operations

Security and Traceability of Humanitarian Commodities

Demonstration Objectives:

1. Quick, Ad Hoc Install
2. Ultra-Reliable Communications
3. Real-Time Situational Awareness of Location and Status
4. Redundant, Secure Global Backhaul



1. Quick, Ad Hoc Install:

- RSU-3s spaced ~100' apart used as position beacon, data routers
- mist® mesh network auto-configures to minimize hops and latency (Display hops and latency)
- Self-healing (change order and replace nodes)

2. Ultra-Reliable Communications:

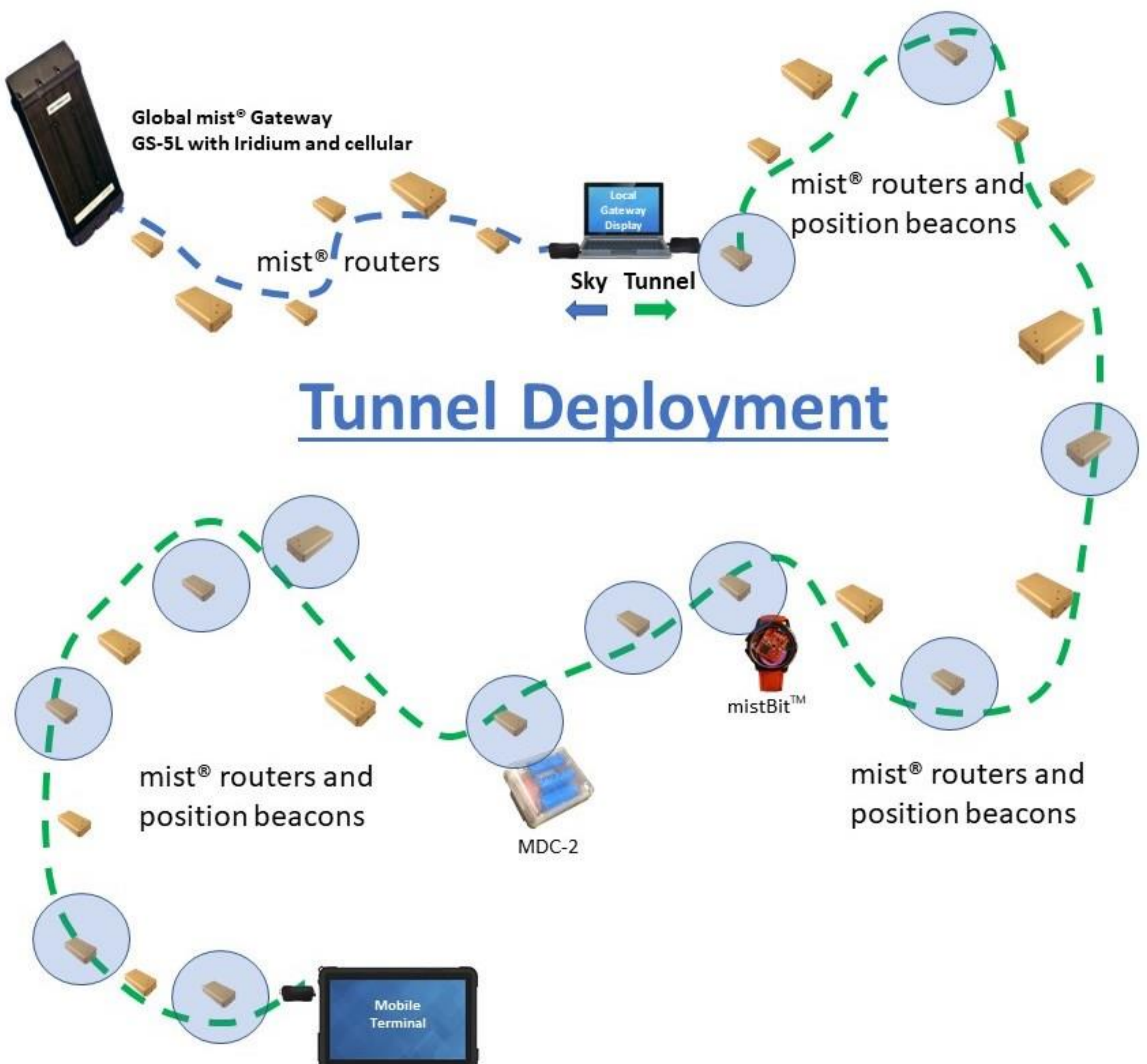
- Pass text (mobile tablet w/ PRU-USB)
- Sensor data (MDC-2)
- Alerts (mistBit) from nodes to gateway
- Send command from gateway to end node (tablet) to take a picture
- Tablet (w/PRU-USB) takes picture and returns image file for display on gateway

3. Situational Awareness:

- Track mobile personnel with mistBee tag for location reports relative to distributed beacons
- Receive nearest position beacon ID with every message

4. Global Backhaul: Create second mesh network from local gateway to global gateway

- Use GS-5L to communicate via Iridium and cellular
- Use second tablet to return a screen shot from the global server showing sensor data and alerts



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