

LEGS

Logistics & Engineering Geo-navigation System

OPERATIONAL PROBLEM

Combat engineering units operating in unstable terrain face challenges in:

- Hazard zone documentation
- Real-time route marking
- Material consumption tracking
- Logistics accountability

Manual tracking methods increase risk and inefficiency.

THE LEGS SOLUTION

- Geo-navigation and resource tracking platform
- Marks terrain hazards and tracks material usage
- Provides real-time logistics visibility
- Supports structured engineering operations
- OODA loop compressed to 2-5 seconds for rapid awareness



CORE CAPABILITIES

- Safe route marking and sharing
- Hazard tagging (marsh, unstable ground, landslide zones)
- Material requirement marking at locations
- Real-time material consumption tracking
- Stores and inventory tracking
- Live field updates

OPERATIONAL ADVANTAGE

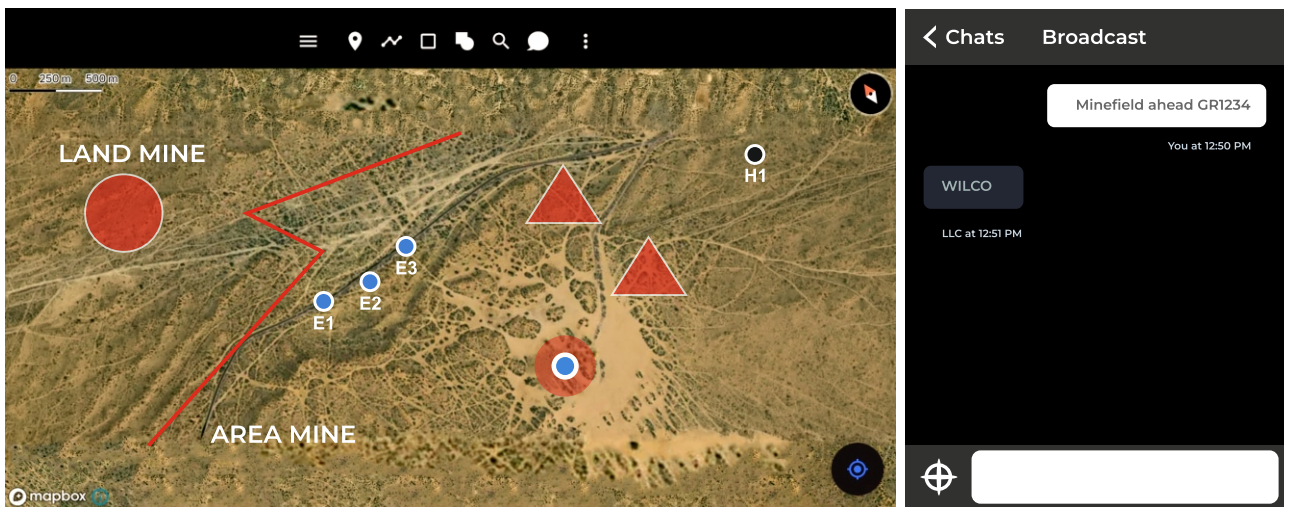
- Improved route safety
- Reduced logistical losses
- Better resource utilization
- Enhanced mission planning



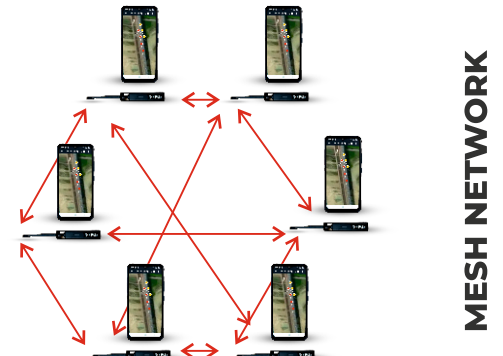
HOW THE SYSTEM WORKS

- Situational Communication System
 - Digital Radio Device + Android display + App
 - See live location of each other
 - Text to All OR 1 to 1
 - Send Tact symbols/Markers in Group / 1 to 1
 - Users: Armed forces, NSG, Spl Forces

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INDUCTED IN

- Northern Command • Western Command • Eastern Command • Special Forces (Para SF)
- Central Command • Cobra, CRPF • ARTRAC

1. Physical Characteristics

Connection with PDA: Situational Awareness App
Security: AES256 or higher
Data Transfer: Information overlay exchange for line diagrams, circles, symbols, and messaging within app
Map: Satellite map and map download
Protocol: Mesh Networking
Hop Limit: 6

Bluetooth Connectivity: BLE 4.0+ or higher
Weight (including battery): ≤ 100 gm
USB Port: Micro USB 2.0 or higher
Ingress Protection: IP68 or better

2. Tech Specification

A) Receiver

Frequency:

UHF 445 to 480 MHz (User selectable)

Channel Spacing:

7.28 KHz, 11.8 KHz (User selectable)

Frequency Stability (-30°C to +60°C):

2.5 ppm or better

Digital Sensitivity (1% BER, 6.25 KHz):

-116 dBm or better

Sensitivity (1% BER, 25 KHz):

-107 dBm or better

(B) Transmitter

Power Output: 0.5W to 5W (27dBm, 30dBm, 37dBm) – User selectable

Digital Modulation: 4GFSK or better

(C) Environmental Specification

Operating Temperature: -20°C to +35°C

(D) Battery

Type: Lithium Based

Backup (Standby): 30 hours or higher

Backup: Up to 9 hours or higher

Capacity: 450 mAh, 3.51 Whr or higher

Charging Time: Minimum 3.5 hours

Battery Bank: Minimum 20000 mAh

(E) SAS-PDA

Display: 1080 × 2408 pixels (6.6 inches), PLS LCD

RAM: Minimum 4 GB

Weight: Less than 200 gm

Battery: Minimum 4000 mAh

OS: Android 12 or above

CPU: Octa-core

Internal Memory: Minimum 64 GB

Camera: Minimum 50 MP

Connectivity Support: WiFi, Bluetooth & LE

Charger: Type-C & Micro USB support

Additional Sensors: Accelerometer & Compass

(F) Deployment Box

Weight (Empty): Maximum 12 kg

Function: Storage & charging of 30 radio sets

Battery

Backup: Minimum 1.5 hours

(20 fully discharged radio sets)

Charging Time: Max 10 hours

Type: Lithium based

Power Input: 110/220V AC

Auxiliary Input: 10–18V DC (Car charger port)

Additional Features

Display: Minimum 7" (Touchscreen)

Resolution: 1280 × 720 or better

Capabilities:

- Config & issue of soft frequencies
- Encryption key generation
- Team location tracking
- Messaging
- Device status
- Distance tracking (commander to team member)
- Overlay lines/objects sharing

USB Ports: Minimum 3

Internal Storage: Minimum 32 GB

External Storage: Micro SD slot

Connectivity: WiFi

(G) Additional Specification

Mesh Networking Protocol: Aspen Grove

Hop Limit: Minimum 6 or higher

Jamming Resistance: Highly resistant within its band

Spectrum: Built-in spectrum

Graphical UI: Displays graphical image on PDA

GPS: PDA has GPS information

SW Color Coding: Color coding for users (IFF identification)

Compatibility: Compatible with Indian Army radios (Harris, StarsV, etc.) for data transmission & screen recreation

OUR OTHER PRODUCTS

Expanding the Tactical Ecosystem

INFANTRY : **SIVAS (Situational Intelligence Visualization & Awareness System)**

A secure, infrastructure-independent battlefield communication and awareness platform. Designed for real-time asset tracking, encrypted team coordination, and tactical visualization, it delivers resilient performance in contested, remote, and GPS-denied environments.

INTELLIGENCE : **NETRA (Networked Electronic Tactical Reconnaissance & Awareness)**

A covert, infrastructure-independent communication and tracking system designed for intelligence and surveillance operations. NETRA enables secure team coordination, real-time asset visibility, and low-signature data exchange through resilient mesh networking, ensuring reliable performance in denied, urban, and high-risk environments.

SPL FORCES : **NISAN (Networked Intelligence Situational Awareness & Navigation)**

A low-signature tactical coordination system for special operations forces. NISAN delivers real-time team tracking, encrypted communication, and structured threat awareness in denied and high-risk environments, ensuring secure mission execution without infrastructure dependence.

ARTILLARY/AAD : **RANN (Real-time Artillery Network & Navigation)**

A digitized fire coordination and artillery networking solution that connects OPs, CPs, and gun systems into a unified operational picture. RANN enhances precision targeting, fire correction workflows, secure messaging, and real-time friendly-force awareness.

ARMoured/MECH : **RANA (Real-time Armoured Navigation & Awareness)**

An integrated mobility and vehicle-status platform built for armoured and mechanized formations. RANA provides real-time fleet tracking, geofencing alerts, command synchronization, and vehicle health visibility, ensuring coordinated manoeuvre and operational readiness.

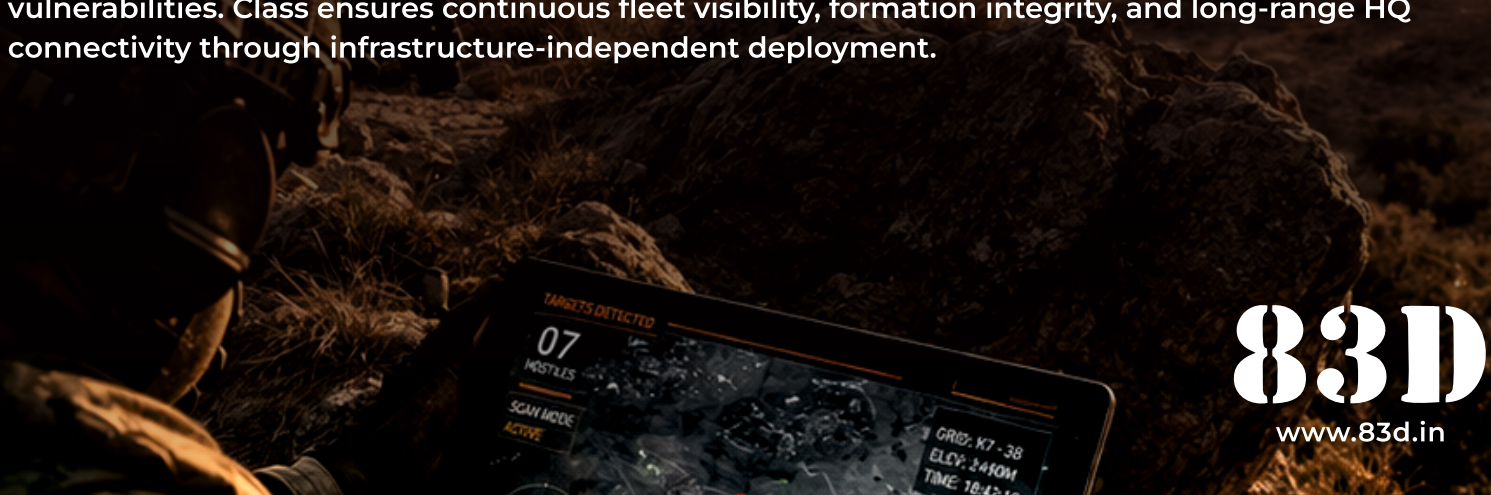
EME/ASC : **ARV-SAS (Armoured Recovery Vehicle - Situational Awareness System)**

A dedicated recovery and sustainment platform for armoured formations, ARV-SAS enables real-time tracking of disabled vehicles, coordinated recovery operations, and seamless integration with EME and TRAC units. It enhances battlefield resilience by ensuring rapid recovery, efficient repair workflows, and continuous operational readiness in contested environments.

SPECIAL SOLUTIONS

CONVOY : **CLASS (Convoy Loc Awareness & Situation Status)**

A hybrid convoy intelligence and resilient communication system designed to eliminate dead-zone vulnerabilities. Class ensures continuous fleet visibility, formation integrity, and long-range HQ connectivity through infrastructure-independent deployment.



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