The 3D-P Underground Positioning System enables navigation for mobile applications, as well as personnel and asset location throughout the mine.

**Features**
- Real-time positioning of connected devices
- 3D-P IEP's can provide positioning to hosted or connected applications
- Works with any available Wi-Fi network
- Dashboard provides:
  - Site visualization
  - Alerting
  - Playback of positions
  - Inspection of fingerprints database
  - Playback of stored position data
- Geo-fencing capability for alerting or IoT integrations:
  - Alarms
  - Lighting control
  - Traffic light
- Smart tags include an alert/panic button which signals an alert on the dashboard as well as email alerts

**Components**
- Local or Cloud-based server
- Online dashboard for:
  - Configuration/administration
  - Monitoring of assets
  - Alerts/alarms
- SDK for custom app development
- API for custom integration
- Custom app for fingerprinting
- 3D-P IEP or Smart Tag for tracking/positioning

**How it Works**
- A geo-referenced database of RF fingerprints is created for the mine
- A custom app runs on each device
- The app periodically scans ambient Wi-Fi signals
- The device's location is estimated based on a comparison of the current RF measurements and the stored fingerprints

**Location Accuracy**
Dependent on the density of available signals and fingerprinting quality, position accuracy averages 2 meters