

CASE STUDY

MP DIAL 112 STRENGTHENS STATEWIDE EMERGENCY RESPONSE WITH PERTSOL iLOCATOR



INTRODUCTION

MP Dial 112 is one of Madhya Pradesh's primary emergency response platforms, responsible for enabling rapid coordination between citizens and emergency services across the state. As part of the MP Dial 112 Phase-II modernization initiative, the project required an advanced Location Intelligence platform capable of accurately identifying and tracking distress callers across multiple telecom networks and communication channels.

To support these operational requirements, PertSol deployed its iLocator platform to strengthen real-time emergency caller location visibility, improve dispatch coordination, and support continuous location tracking during active incidents.

The deployment was designed to integrate with the existing emergency response ecosystem while supporting large-scale emergency operations, telecom interoperability, and future service scalability.

CHALLENGES

As part of the Phase-II upgrade, MP Dial 112 required a telecom-grade location intelligence solution capable of operating across diverse network environments while supporting uninterrupted emergency response operations.

KEY CHALLENGES INCLUDED:

- ✓ Accurately identifying distress caller locations across GSM, CDMA, 3G, 4G/LTE, and 5G voice networks.
- ✓ Supporting both smartphone and feature phone users irrespective of telecom operator infrastructure.
- ✓ Providing location tracking even in scenarios where telecom operators lacked GMLC infrastructure.
- ✓ Integrating seamlessly with existing and future CAD platforms without disrupting live emergency operations.
- ✓ Supporting emergency requests received through voice calls, SMS, missed calls, and PSTN/landline networks.
- ✓ Delivering real-time latitude and longitude information to dispatch operators and rescue teams.
- ✓ Enabling continuous victim location tracking until assistance reaches the caller.

- ✓ Ensuring fast location detection within 5–15 seconds during critical emergency situations.
- ✓ Maintaining interoperability with multiple telecom operators while supporting MNP-compliant routing and query mechanisms.
- ✓ Providing scalable architecture capable of supporting increasing emergency response requests and future service expansion.

WHY MP DIAL 112 CHOSE PERTSOL

MP Dial 112 selected PertSol based on its proven experience in delivering telecom-grade Location Intelligence solutions for emergency response agencies across India. With successful deployments across multiple Dial 100, Dial 112, & emergency service projects, PertSol offered a scalable & operator-agnostic platform capable of integrating with existing emergency response infrastructure while delivering accurate, real-time caller location intelligence. The platform's ability to support multi-operator environments, continuous victim tracking, CAD integration, & high-availability deployment architecture aligned closely with the operational requirements of MP Dial 112.

SOLUTION

PertSol implemented a centralized Location Intelligence architecture using the iLocator platform for MP Dial 112 Phase-II emergency response operations.

KEY ELEMENTS OF THE IMPLEMENTATION INCLUDED:

- ✓ Integrated iLocator with the emergency response ecosystem to enable real-time location querying and continuous victim tracking.
- ✓ Enabled location detection for emergency requests received through voice calls, SMS, missed calls, and PSTN/landline networks.
- ✓ Integrated with telecom operators using GMLC, HLR, SDR, SIGTRAN, and MAP-based interfaces for accurate location intelligence.
- ✓ Implemented MNP-compliant routing mechanisms to identify and process subscriber information across telecom operators.
- ✓ Enabled location tracking even in cases where telecom operators lacked GMLC infrastructure through HLR and alternate telecom data integrations.
- ✓ Configured the platform to provide latitude and longitude coordinates directly to CAD operators and rescue teams.
- ✓ Enabled continuous location feeds to MDT platforms for improved field response coordination.
- ✓ Integrated SDR database workflows to retrieve subscriber metadata and translate wireline address information into geo-coordinates.
- ✓ Designed the deployment using Active-Passive clustering architecture to ensure high availability & operational continuity.
- ✓ Supported interoperability with Google Maps, Here Maps, Bing Maps, GIS databases, and ESRI-based mapping environments.
- ✓ Enabled secure role-based access controls, audit logging, monitoring, and browser-based secure access mechanisms.
- ✓ Configured the system to support rapid caller location detection within 5–15 seconds during emergency response operations.

RESULTS

The deployment of PertSol iLocator enabled MP Dial 112 to strengthen emergency response operations by improving real-time caller location visibility and response coordination across the state.

KEY OUTCOMES INCLUDED

- ✓ Faster emergency response through rapid distress caller location identification.
 - ✓ Real-time visibility of caller locations for dispatch operators and emergency response teams.
 - ✓ Improved coordination between control rooms and field responders through continuous location updates.
 - ✓ Continuous victim tracking support during active emergency incidents.
 - ✓ Enhanced telecom interoperability across multiple operators and network technologies.
 - ✓ Reliable location intelligence support for both wireless and wireline callers.
 - ✓ Seamless integration with existing CAD and MDT systems without operational disruption.
 - ✓ Improved operational efficiency through automated and intelligent location workflows.
 - ✓ High-availability and scalable deployment architecture to support statewide emergency operations.
 - ✓ Strengthened emergency response readiness with future-ready Location Intelligence capabilities.
- With the deployment of iLocator, MP Dial 112 established a robust and scalable Location Intelligence framework that enhances caller location visibility, accelerates emergency response, & supports more informed decision-making across statewide emergency operations.

KEY HIGHLIGHTS

Problem	Solution	Impact
Difficulty locating distress callers across multiple telecom networks	Deployment of PertSol iLocator with GMLC, HLR, SDR, and MNP integrations	Faster and more accurate caller location identification
Need to support voice, SMS, missed-call, and landline emergency requests	Multi-channel location intelligence workflows	Improved emergency response coverage across communication channels
Requirement for continuous victim tracking during active incidents	Real-time location tracking integrated with CAD and MDT platforms	Enhanced coordination between control rooms and field responders
Limited location visibility where operator GMLC infrastructure is unavailable	HLR-based location intelligence and alternate telecom integrations	Reliable caller location intelligence across diverse telecom environments
Need for rapid location detection during emergencies	Automated real-time location query engine	Faster dispatch and response times
Requirement for interoperability across multiple telecom operators	MNP-compliant multi-operator integration architecture	Seamless statewide telecom interoperability
Need to integrate location intelligence without disrupting Dial 112 operations	Centralized iLocator integration with existing emergency response systems	Seamless deployment with no operational impact
Requirement for scalable and resilient emergency response infrastructure	High-availability Active-Passive deployment architecture	Future-ready platform supporting statewide expansion

“When someone needs help, finding them should never slow the response. Real-time location intelligence removes uncertainty, helping emergency teams reach people faster when every second matters.”