

CIPro Critical Infrastructure Protection

Introduction

Critical infrastructure like power plants, oil refineries, dams, reservoirs, etc., form the backbone of a country. In addition to these, there are key establishments like government offices and industries, technology parks, heritage and religious sites, all of which are economic and social assets of a country and any harm to these could significantly affect the functioning of the country.

Mistral Solutions, a leading player in the homeland security arena offers ready-to-deploy, proven, high-technology security solutions for strategic and tactical requirements. Its world-class technology and systems provide effective, efficient and essential Homeland Security solutions addressing the needs of PSUs, Police, Paramilitary Forces and Government for implementation of security measures at both the organization and national levels.

CIPro, the Critical Infrastructure Protection solutions from Mistral integrates and manages all resources vital to the protection of national assets. These solutions can be deployed for securing religious sites, sensitive government offices, seaports, oil refineries and pipelines, power plants, mines, etc. The solution is built around the C4ISR concept and is the center for data collection and dissemination – ensuring information is communicated to relevant contact points in real-time to mitigate risks.

CIPro consists of two components: the sensor network and the command and control network.

The sensor network

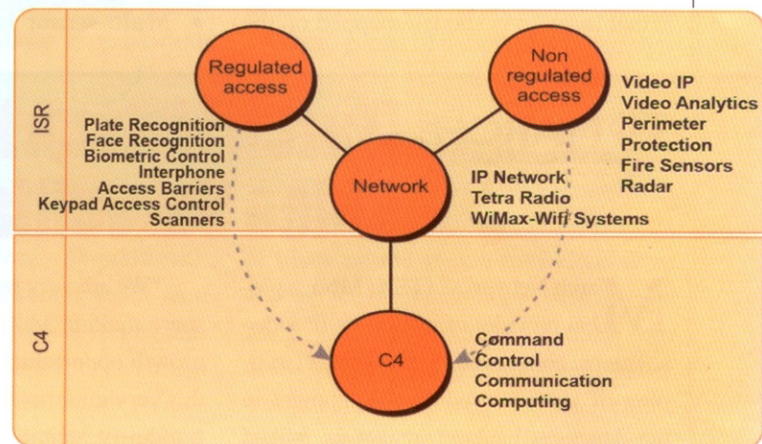
The sensor network consists of devices that aim to control the entry and movement of individuals and entities to the premises of the critical infrastructure, and to monitor the activities of those individuals and entities within the premises.

SENSOR GROUP	SENSOR
Access Control	Iris recognition, Fingerprint, Facial recognition, Access cards, Number-plate recognition, Access doors, RFID/ Wi-Fi Indoor location, Presence authorization, Vehicle scanner, Person scanner, Baggage scanner

Video Surveillance	PTZ camera, Fixed camera, IR camera, Thermal camera, Video analytics, Video-wall
Perimeter Surveillance	Fire detector, IR barrier, RF barrier, Movement detectors, Vibration detectors, Buried cable

The command and control network

The command and control network picks up the inputs from the sensor network, places them in a cartographic representation of the facility/ premises, allows communication between emergency response units, and outlines emergency response protocols for these units to follow.

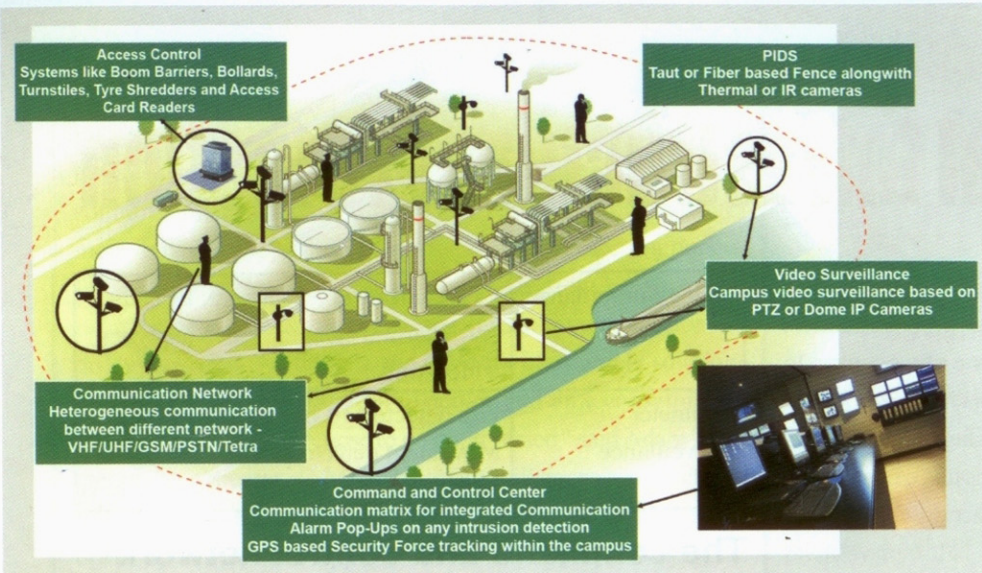


It allows a user to:

- Access a Common Operational Picture (COP) of the surveillance and emergency response infrastructure at the premises.
- Represent response units and sensors on a map, and interact with them for further information.
- Transparently and seamlessly facilitate communication amongst the various emergency response units and the control centre.
- Automate emergency response tasks and guide participants in the implementation of emergency response protocols.
- Generate reports and statistical data.

Case study

This case study showcases the implementation of the CIPro solution for security and surveillance of a seaport. Various types of PIDS sensors like IP video cameras, access con-



trol, radars etc., are integrated into the systems and monitored at the command and control center. Any inconsistency or incident is alerted by the system and the actual location is shown/ mapped on the

cartography tool at the operator console for immediate action.

Advantages

- **Multi-sensor integration:** Supports

integration of different types of sensors into the system – Radar, thermal cameras, listening devices, etc.

- **Multi-protocol communication switch:** Allows communication between different types of communication protocols – V/U/HF, Tetra, GSM, CDMA, UMTS, VoIP, etc.
- **User friendly GUI-based application:** Ensures that surveillance personnel can use infrastructure with minimum training.
- **Command and control module:** Enables user to control the sensors and field resources, map them onto a cartographic data, and assign resources and responsibility for specific events triggered by the surveillance system. ■