

Perimeter Security

The Perimeter Security System is **the first level of protection**. Its role is to **deter, detect, delay, deny and defend** intrusion. In the event of an intrusion the system must be designed to delay the intruder so as to give the Security forces adequate time to respond suitably.

What are the latest technology trends in Perimeter Security?

In the early days when the threat perception was relatively low a simple hedge or a 4 feet high fence was adequate. RCC compound walls of varying heights were deployed at high security locations. As threat perceptions grew, so did the technology deployed in perimeter protection systems. The latest trends include:

- Electrified fence
- Fence with fibre optic cable and sensors.
- Virtual trip wire using Cameras and Video Analytics.
- Use of thermal cameras
- **A combination of all of the above depending on the perceived threat.**

Every application is unique as the factors defining the selection of the Perimeter Security System could be different. Some of the essential factors taken into consideration in the design of the system are:

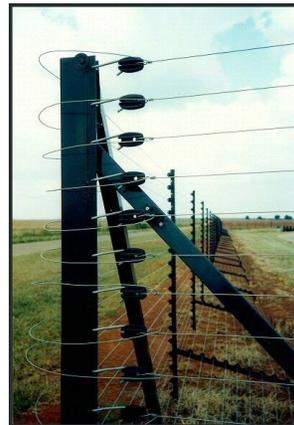
- Type of facility to be protected
- Sensitivity of the facility
- Environment around the facility
- History of intrusion
- Threat perception.

The Perimeter Security system often comprises of different but complementary technologies that form 'Layers of protection'. This must be a part of an integrated site security plan.

Comparison of Perimeter Security Systems

Electrified Fence

An electric fence is a barrier that uses electrical shocks to deter intruders from crossing a boundary. The voltage of the shock may have effects ranging from uncomfortable, to painful or even lethal. Most electric fencing is used today for sensitive locations and agriculture fencing. It does provide round-the-clock vigilance. However this technology has to be used in conjunction with cameras to make it more effective in determining false alarms.



Fibre Optics

This technology provides a new dimension in detecting and locating fence line and perimeter intrusions. A laser beam is transmitted along the fence mounted sensor cable and the returned signal is automatically monitored and analyzed by the sensing controller for disturbances on the fence. The returned signal is intelligently processed to minimize nuisance alarms, while still detecting and reacting to a hostile event. **This technology must also be used in conjunction with cameras** to 'see' and 'follow' the intruder.

CCTV combined with lighting

Video surveillance with video analytics is an effective tool for securing the perimeter. However, **CCTV cameras do not see much in total darkness.** In order to detect intruders **at night, lighting is a must.** Light can only penetrate a certain distance and completely illuminating an area so that it can be kept under surveillance of CCTV cameras, is not always possible.

Thermal Imaging Cameras.

Thermal cameras provide effective surveillance in conditions of smoke, light fog, light rain, and even light snow. Since the camera views events through the thermal spectrum, the images from day and night are nearly identical making the thermal imaging camera a true 24 hour surveillance device. **The camera can 'see' in absolute darkness and over a greater range. Therefore a lesser number of cameras are required.**

How Perimeter Security can add value to various verticals?

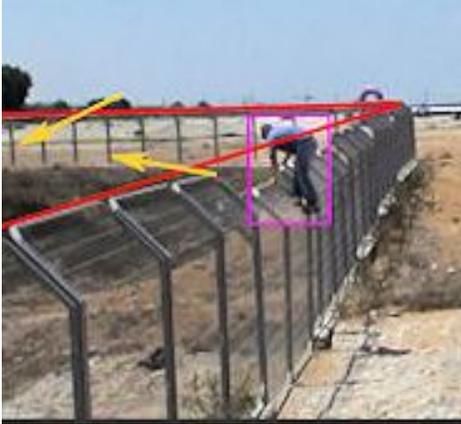
Perimeter Security ensures that the property is adequately protected. Depending on the threat perception, different technologies and layers of security should be deployed. It does not matter whether the property is a Nuclear plant, a Military camp, a Government building, an Office complex or a Mall. People either work inside this property or visit it for conducting business or for shopping. **Simply knowing that one is secure inside a facility adds great value to the property.**

How the Perimeter Security can help in time of crisis?

A Perimeter Security system is designed to protect the assets inside the property from unauthorized intrusion. **In the event of an external crisis the property can be 'quickly and effectively' locked down.** The System will deter the events unfolding outside from penetrating the facility. Should the threat make this difficult it will certainly delay the potential threat from gaining access to the facility. This will provide the Security Agencies to prepare an adequate response to deny access to the intruders.

How to use the Perimeter Security effectively?

As the threat perception increases a combination of technologies must be deployed to provide effective Perimeter Security. RCC or Electrified fence or both, with cameras suitably mounted to provide a virtual trip wire are deployed at the outer most security layer. The perimeter system must be integrated with the Video surveillance system so that any attempted intrusion would trigger the PTZ camera to zoom in on the Zone and identify the nature of the intrusion. Early detection provides the security staff adequate time to effectively counter the threat.



Perimeter protection using a virtual trip wire

Integration with other security systems like video surveillance is the key.

What are the cost implications for Perimeter Security?

The cost of a Perimeter System depends on the type of system deployed. This in turn depends on the perceived threat and the value of the asset (property) to be protected. **It is important that the environment and the perceived threat is accurately assessed as the cost would be in direct proportion to the perceived threat.** Very sensitive locations would require multiple layers of security. This would imply even higher costs.

A Perimeter Security system is a necessity and cost cannot and should not be a consideration.
