



### Protectomatic security system

#### **Strictly confidential information about Protectomatic TSS system.**

Laseroptronix is happy to offer the Protectomatic security system for a complete control of intruders and all movements of authorised staff in small and larger areas. This is TSS the Total Security Solution. This very advanced solution is not complex in its simplicity and offers a great step ahead to complete control of key areas and what is happening here.

Protectomatic is a combination of new electro optical sensors using sensor fusion technology to detect all types of movements in selected areas . When they are matching determined parameters for an alarm this is activated in a fail safe way. Alarm data includes position of intruders and normally an image of what caused the alarm by an integrated camera.

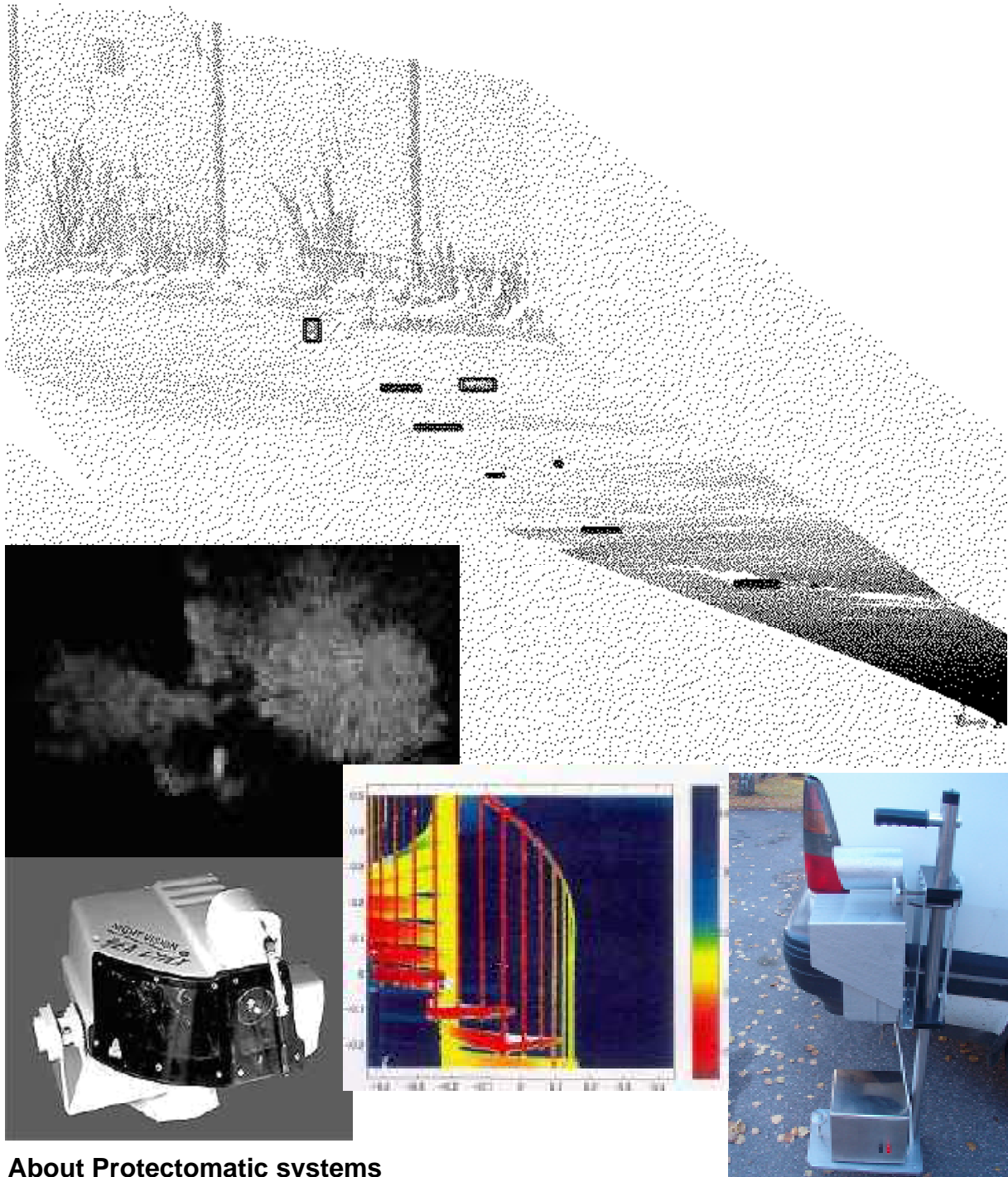
Protectomatic is based on a network of sensors talking to a data base. Each moveable object and person in the area shall have an own unique identity card. The long distance reading of these cards makes it possible to set invisible borders over large outdoor areas and dividing areas into unique zones. Each zone can have its own parameters for alarms and allowed visitors. Unique is the possibility to detect and give alarms for people with no cards at all . Persons with cards gives no alarm but are stored in the data base for logistics purpose. We can also detect the difference between persons and cars and also see several objects individually in the area at same time. Cars can give no alarms but pedestrians do. It us up to you to decide what shall cause the alarm.

Protectomatic is fully automatic and very simple to operate. Its ability to only give alarms when there is a reason for this will reduce the stress for false alarms . False alarms ends that the staff do not check when they should .This happened 99 times earlier it was no real alarm so why care? This system reduce the false alarms by smart electro optical solutions. If there is an alarm we do normally grab an image of what caused the alarm to avoid running for alarms caused by birds and animals etc.

The collected data is stored in a database so it is possible to document what has happened and from this knowledge do better decisions for the future. The capability to know where authorised are located in the area makes it easy to find staff when needed.

*Many of our productr are protected by patents and patent applications*

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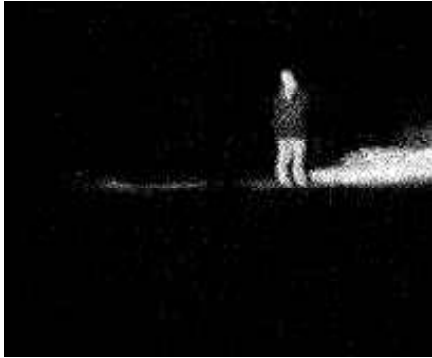
## About Protectomatic systems

This is a modular scalable solution easy to install and use in various applications. The demands on the operators expertise is not to high. The capability to only detect what is of interest is a key for a working and reliable solution for 24 hours per day. This makes it very universal and easy to use as it demands no experts or superman to get the demanded results.

Costs depends a lot how you calculate. If you consider the costs of high quality fences and good perimeter solutions Protectomatic is not an expensive solution. What is the alternative cost for more staff working more and harder? This is very cost efficient for the user compared to less attractive alternatives. Life cycle costs are very favourable with the Protectomatic solution.

The wireless options makes the installation cheaper than cable related systems. It is easy to move sensors and the system can be considered at semi portable.

Protectomatic system is protected by patent applications.



## Typical application areas of Protectomatic

\* Airports at out and indoor in key areas. We can cover the entire area with runways, hangars and perimeter protection. We can also offer a system detecting debris on runways. This is often called a FOD system (foreign object detector). This will detect all from birds and lost details to persons moving in the area.

Protectomatic is suitable for control of parked aircrafts to see if someone has been close to the aircraft and if this shall initiate a bomb search on the aircraft.

We can separate cars from pedestrians and at long range check the identity of what was detected. This makes the system very complete in a different way to other solutions. All movements are checked and Protectomatic saves all movements in the storage for later analyse.

\* Harbour areas where we can cover the sea as well as the land area. We have a special sub sea alarm detector for divers. Divers on surface and swimmers can be detected as well as small rubber boats.

Employed staff carry our ID cards and are accepted to be at predetermined areas in the harbour and everyone else creates an alarm. It is possible to create path ways from boats to the gate where no cards are needed at all so visiting boats crew do not need any cards. If they by some reason walk around in the area they will cause an alarm.

\* Nuclear power stations and industrial areas where there is a mix of indoor and outdoor areas needing protection. Here we scan perimeters and if someone cross the border lines with no admittance and then send an alarm. We do scan larger areas inside fences and can generate invisible border lines separating zones with different demands in security.

The outdoor sensors and linked to same network as the indoor sensors and booth are checked with electro optical sensing as well as the card controller unit.

This makes the entire area very well protected and secure. The general philosophy is a fail safe alarm giving attention and alarm to operators when something is broken or malfunction. We have added functions so the system shall tell if someone tries to fool the system or get it out of operation.

\* Military camps and areas.

These are similar to other applications but we have add sensor systems for viewing areas outside the fences / border lines. The unique Optofinder detects the cat eye reflex from the counter parts binoculars or night vision systems. The knowledge that someone is watching you is very valuable and avoid bad surprises from a well equipped enemy.

It is possible to determine areas where all can make visits with no ID cards and combine them with checked zones beside this area where a card with authorization is needed. This combination makes the security work in the camp far easier.

Today's hostile environment makes the need for very safe solutions a must and acts of terrorists is increasing the threat even more.



# Protectomatic

## General Description and applications

### Hardware and network

#### **ID Cards**

Each person admitted to be in the carry a special ID card of a unique design. This is active with 2 way communication. The Card keeps the key parameters for the persons where and when he can be in specified areas or not. The card can also have a unique but simple solution confirming that the authorized owner carry it and no one else.

Indoor detectors and sensors

Indoor sensors with up to 10-20 meter range is an electro optical unit with card reader for checking what is in the checked area.

#### **Out door detector and sensors**

Outdoor sensors with up to 500 meter range with a long range electro optical unit and long range card controller. This checks larger outdoor areas independent of light and sunshine. Functions are like the indoor units but areas are far larger.

Indoor and outdoor units do normally have a camera unit so all events are related to a position in the area and an image of what caused the alarm. This makes it easy to react to the intrusion in a correct way.

#### **Optofinder and active laser camera systems**

Optofinder / 24 hour camera unit with pan and tilt unit. This unit can be set to scan automatically over areas for detection and to what is there. This special active camera have the capability to see in darkness behind lamps and in areas with combinations of good illumination with dark shadows. Goggles do view the outer area of vegetation when you have a little ambient light. Optofinder see through vegetation and penetrate deep into the shadows. If there is some one walking a bit inside a forest and he is covered with 50-70 % of vegetation you can easily see him even if you have bright lamps behind yourself and he is a few hundred meters away. Goggles are useless in this case.

Unique is the capability to detect optics in the field of view by the optics internal cat eye reflex. This camera is normally mounted in a high position and can look at any key points in the area. The camera is very suitable for looking outside the protected area for other curious observers looking at your activities.

Intensified camera systems

Image intensified cameras with IR back up lights is an alternative which can be OK in desert style areas with no vegetation.

#### **Thermal camera systems**

Thermal camera can be connected to see the temperature profile of the area. They are good in many cases and a complement to the other camera systems. In rocky areas they are limited during a large part of the time as the temperature profile is complex in the nature.