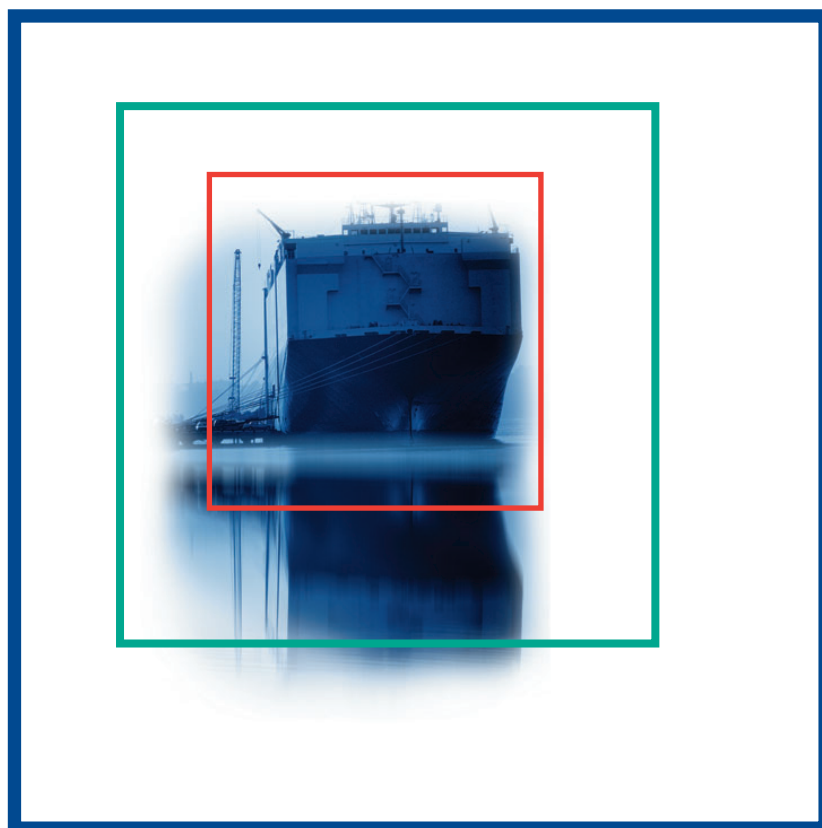


# 3 layers of security



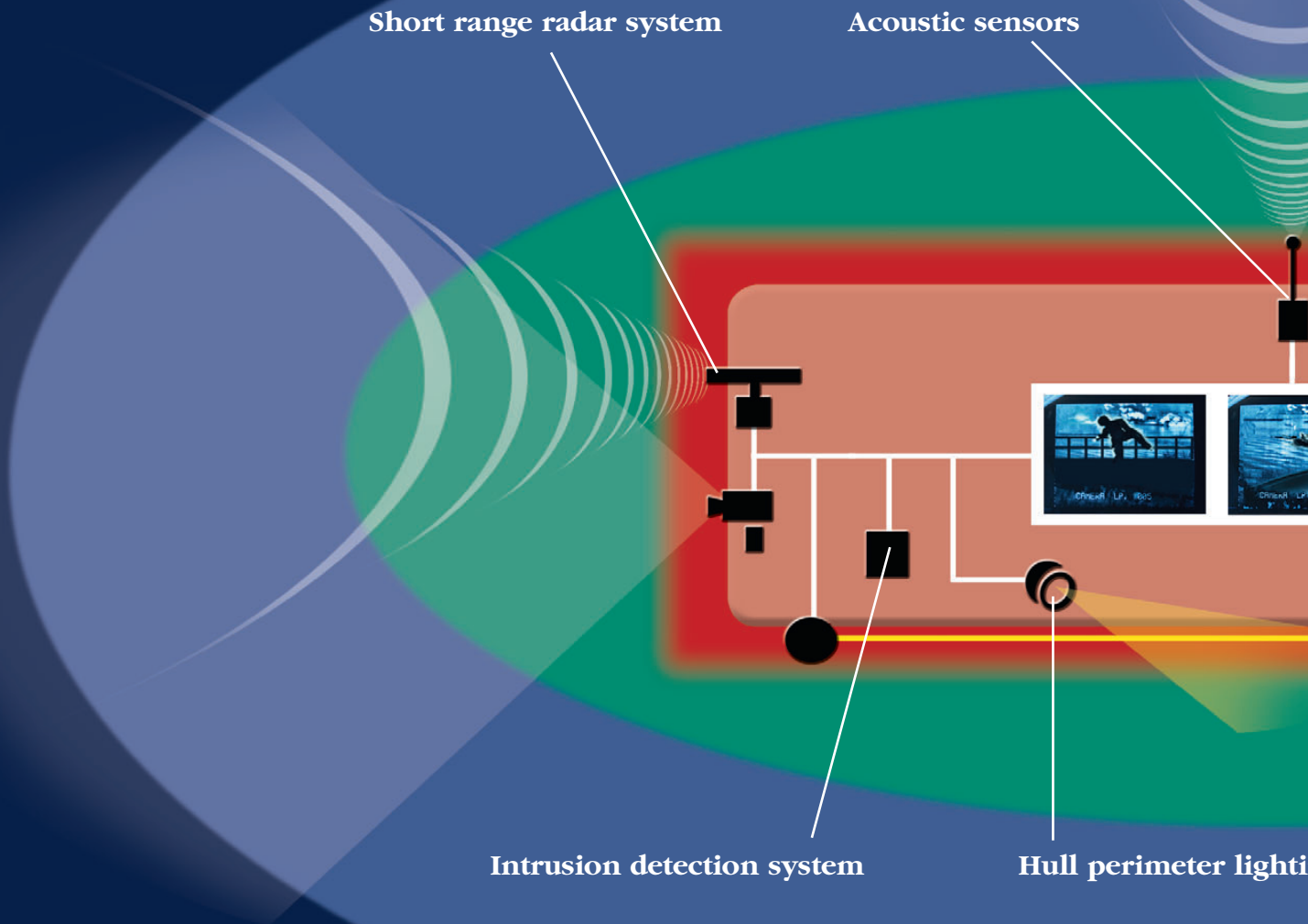
Vessel safety & security solutions by  
HERNIS Scan Systems



# Visual Integrated Systems (V.I.S)

Increased safety and operability continues to be the driving force behind the V.I.S concept. The system interface consists of a serial link that is primarily intended for automatic triggering of camera selections and release of camera pre-set positions in the event of alarms. In addition to the traditional system sensors, the mimic shows also all the camera locations. Hence, in the

event of an alarm, the operator will immediately get an indication of which sensor triggered the alarm and which camera selections the alarm event has selected. The images of the cameras selected due to the alarm event are shown on the CCTV monitors. Further development of the interface may be to interconnect the systems



## 3 layers of security

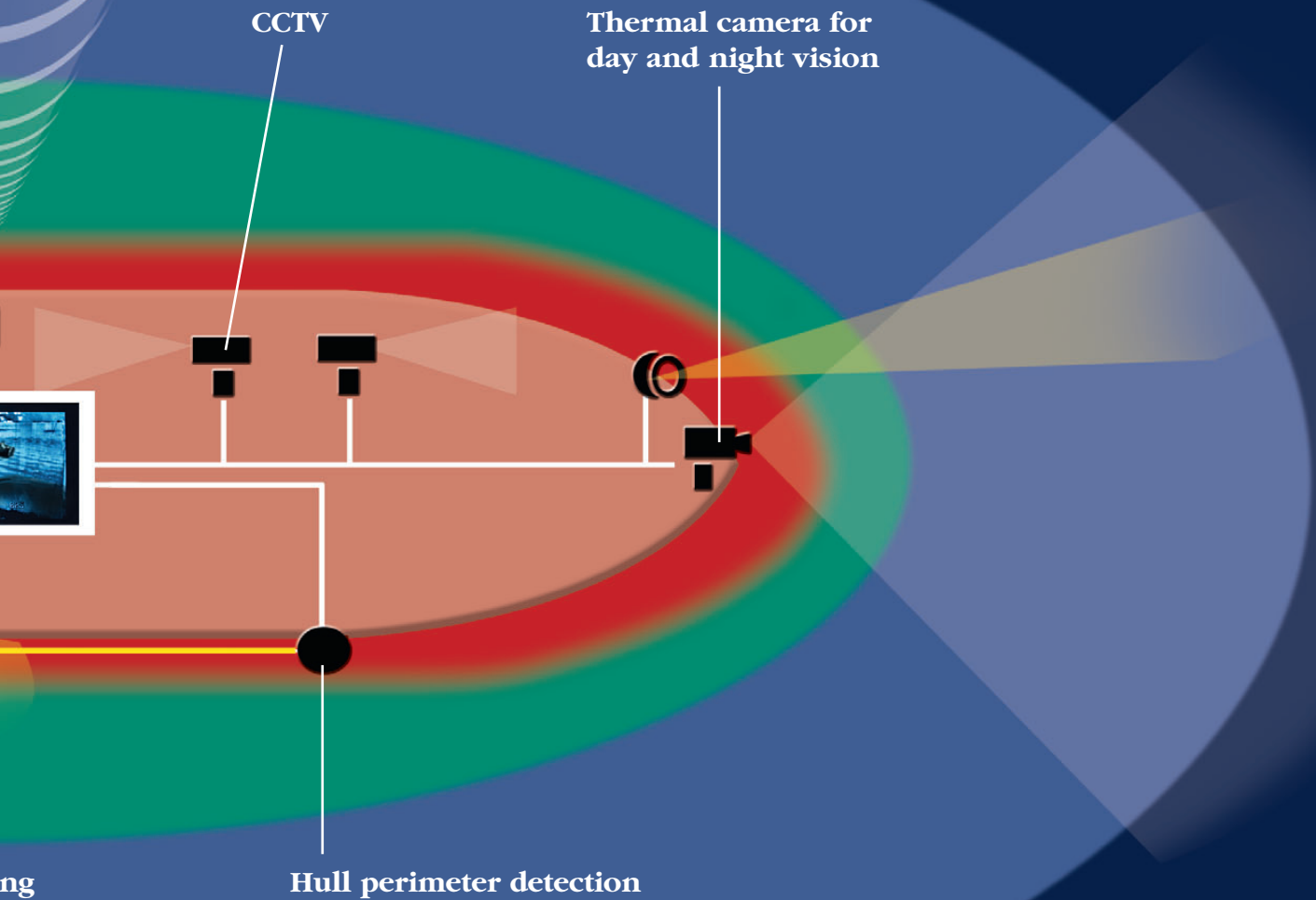
The intrusion detection areas, or layers, are divided into three, internally (layer 1), onboard external (layer 2), and peripheral to the ships hull (layer 3). Each layer may have one or more methods of detection. The primary detection methods used internally are video motion detection coupled with switches and or optical sensors located on the access

doors hatches. In the event of an intrusion, the camera which detected movement will automatically be switched to a station and a signal will be given to start the audible warning message, and if applicable record the pre and post alarm images on to a recording media.

A similar detection method may be used for layer 2

on LAN and adding a simple window for camera control (i.e. pan, tilt, zoom, focus, etc.). The window may also contain live images from the selected camera for ease of operation and to enable those operators of the Hosting system without CCTV monitors to view images from the CCTV system.

The mimic could also show the general sector in which a pan and tilt camera is pointing. The "Host"-CCTV interface concept can also be expanded to not only include fire alarms, but also security alarms, flooding alarms, shell door alarms, etc. "Seeing is believing", effective utilization of visual information in new applications may be designed to suit virtually any application.



using IR detectors and/or line detectors in combination with VMD. The system will also be able to activate lights in the various sectors onboard as an additional deterrence to the audible alarm. The detection method proposed for layer 3 is audible pattern recognition, and short range radar coupled to the thermal imaging and colour cameras for image

verification. If an alarm condition is detected in the radar image / audible detection system, the thermal imaging camera and / or colour camera will move to the predetermined sector and the images will be displayed on the monitor for operator verification. Lights and audible warning may be activated automatically upon detection, after a predetermined / adjustable time period after detection, or manually.

## ■ Visual Integrated System (V.I.S)

V.I.S is a new way of looking at traditional CCTV systems.

The concept is based on integrating video and data to a computerized system for display of images and control of CCTV functions via other computer based systems, thus taking traditional CCTV to a new level.

V.I.S is a virtually unlimited concept, tailor made to fulfil special demands occurring at complex projects such as navy vessels, passenger ships or large oil & gas projects.

The V.I.S concept increases safety, gives savings on installation cost and enables a more beneficial use of the traditional CCTV system.

## ■ CCTV Technology

Using CCTV enables centralised monitoring from one control station, providing complete visual and audio control of all areas and processes on a vessel. The person monitoring from one central control point, a series of events all happening simultaneously, ensures increased productivity, as well as a higher standard of safety than any number of individuals located in separate locations could produce. To withstand the harsh environments, such as in the heat and humidity of the Middle East and the arctic frost of the North Sea, HERNIS has developed housings and enclosures made of maintenance free, electro polished stainless steel.

## ■ Video Motion Detection System (VMD)

A Video Motion Detection System may be connected to the CCTV system in order to detect and authenticate the presence of unauthorized access to critical areas onboard the vessel. The motion detection system can be complimented with a variety of input devices, and may be configured to document the security breach and activate external events.

## ■ Hull Perimeter Detection

Hull Perimeter Detection is designed to protect the immediate perimeter and critical access points of the vessel when the vessel is anchored up or at dock. The perimeter detection system is modularly designed to meet the vessels specific needs. It can be used to activate lights, the ships CCTV system, and audible alarms to deter intruders and minimise damage to property and risk to personnel.

## ■ Near Hull Detection

Near Hull Detection is designed to protect the immediate surroundings of the vessel when the vessel is anchored up or at dock. Underwater acoustic sensors and frequency pattern recognition is used to detect small vessels and or divers in the close vicinity of the vessel.

## ■ Short Range Radar

Short range radars can be used to cover Radar dead ground and may form part of the vessels near to far range detection system.

## ■ Thermal Camera for day and night vision and Oil spill detection

The PT-36W is a weatherproof camera station designed for nighttime surveillance in marine environment. The key purpose is to detect oil spills on water surface as well as personnel and vessel detection in total darkness.

The camera station is delivered complete and fully tested with camera, lens and telemetry control for HERNIS 400 and HERNIS 250 control systems.

Export restrictions applies to this product, and we reserve the right to refuse any sales.

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*HERNIS Scan Systems AS manufactures CCTV (closed circuit television) systems for marine, offshore and petroleum related installations onshore. Established to produce CCTV systems for marine environments in 1982, the company is wholly owned by Vislink Plc., which is listed on the London Stock Exchange. HERNIS has appointed agents around the world.*

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